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ORIGINAL AND ECLECTIC.

ARTICLE I.

Addendum to the "Essay on the Relation of Bilious and Yellow Fever. By RICHARD D. ARNOLD, M.D., Professor of the Theory and Practice of Medicine in the Savannah Medical College.

Since the reading of my essay, several circumstances have occurred to me which I consider as bearing directly and practically on the subject treated therein.

The beginning of each summer, since our epidemic of 1854, has been a time of anxiety for many citizens, and the physician was often catechised as to his opinion, whether or not, Yellow fever was likely to appear. Being no prophet, I could not answer such queries; but, I always said, that if we had such an awfully hot summer as that of 1854, I should look out for an epidemic. The difference of mean temperature does not give any correct idea of the relative heat of two summers. According to the registry published in our newspapers in 1855, the mean temperature of July, 1854, was but one degree above that of July, 1855. When I state that the register was kept by my scientific friend, Dr. J. F. Posey, its correctness will not be doubted. Now, the contrast as to feeling was immense. July, 1855, was a remarkably pleasant month: July, 1854, will live in the memories of those who sweltered under it in this city, as by far the hottest and most oppressive month ever experienced by the "oldest inhabitant."

Measles prevailed epidemically, and with unusual severity during the latter part of January, and during February, March and April.

In May, there was very little sickness of any kind. It is *very rare* ever to see a periodical fever of any type in that month. I was called on the 21st May to see a boy, a native, aged about seven years. I found him with a diarrhoea, and a good deal of general fever: I treated him accordingly. The fever abated notably towards evening, and the next morning it was notably exacerbated, again remitting at night to a perfect apyrexia. As there was thus evident periodicity, I determined to use quinine, which I did.

On the morning of the 23rd, the apyrexia continuing, there being no pain of any kind, no nausea, a pulse down to 80, the skin of a temperature to entitle it to be considered normal, quinine was again given and kept up all day and in the evening, I quitted my patient for the night without the slightest anxiety. At sunrise, I was aroused by a hasty summons, and I found things very much changed with my little patient. The face was pinched, the nostrils dilated, the eyes sunk, the complexion pallid, the expression of the face anxious and haggard, the pulse small, weak and compressible.

A dark stain on the sheet attracted my attention. I was told that at about two o'clock, he began to be nauseated, and shortly after, threw up the black stuff which stained the sheet. The vomiting had continued until my visit. While examining him he threw some of it up, with the spasmodic jerk so often noticed, and it was literally squirted over my clothes. This continued all day, until death closed the scene on the same evening.

He was a very delicate child. What was his disease? I answer unhesitatingly, a case of sporadic Yellow fever. The apyrexia was the deceitful calm so often met with in that type of fever. About the black vomit, there could be no doubt. It was at once recognized by those about the child, for they had seen such too frequently in 1854.

As I will not indulge in speculation, but deal only with facts, let us pass on through the summer. June was remarkably pleasant and remarkably healthy. On the 3d of July, I was called to a case in consultation with my friend, Dr. Wragg. He informed me that the patient had thrown up black vomit, in which I agreed with him after I had examined the *ejecta*. The skin was discolored of a universal yellow. Death soon let down the curtain of existence.

Here, again, was an undoubted case of sporadic Yellow fever. A singular fact is connected with the last case, a gentleman of about thirty-five years of age. He had passed untouched, through the epidemic of 1854, from beginning to end, and was a most active and untiring member of the Young Men's Benevolent Association; for often and often had I met him during that fearful season.

In neither case could an autopsy be obtained.

Up to the very end of September, I never experienced a healthier summer in twenty-six years' practice. After a cold period of weather at that time, there was a warm period. The cold had not produced any frost. I ascertained from various authentic sources that the sweet potato vines were not even wilted. During October, there was a good deal of malarial fever, and of a congestive type.

While attending a case of hydrocephalus, in consultation with my colleague, Dr. J. B. Read, he informed me that he had a case of fever which looked very suspicious, as his eyes were bloodshot, his pulse was sixty, and there was glairy vomiting, and he feared black vomit would follow.

On Thursday, the 23rd, he did throw it up. On Sunday, the 26th, I saw the patient and the black vomit. Every symptom announced genuine Yellow fever. Here was another sporadic case of Yellow fever. An important question to determine, in case of death, was, will it present the same pathological appearances as a case of epidemic Yellow fever?

With but faint hopes of recovery we gave him very large doses of acetate of lead, and *champagne frappee*, freely.

He died on the night of the 28th. Dr. Read fortunately succeeded in obtaining permission for an autopsy, which was made the next morning by Dr. Read, and by my pupil, Mr. Theodore McFarland, who was in the Savannah epidemic of 1854, and then conducted my autopsies, and was one of the Savannah volunteers who went to Norfolk in 1855, assisted by my other pupils, Messrs. Joseph M. Turner and Franklin Jones.

The notes were taken by me on the spot, and sanctioned by Dr. Read, who, in addition to his experience here in 1854, was sent on by the City of Savannah to Norfolk, in 1855.

Autopsy fourteen hours after death. Body fat, of a bright yellow color.

Liver, enlarged, filled with bloody serosity, presenting the pecu-

liar box-wood color, described before as the characteristic color of Yellow fever livers as presented in this locality, during a period of time now covering twenty-nine years.

The acini were not distinct, the liver when cut, was smooth and compact. The liver was much enlarged. The pancreas was also very much enlarged, and had tubercular deposits in the circumjacent glands, and under the peritoneal coat.

Spleen was enlarged, of a lively purple color.

Stomach was intensely and uniformly injected, of a dark red.

The veins of the stomach were very much congested, showing themselves by a black streak, as well as by their distension. The blood in them was black and fluid. The mucous membrane at the cardiac extremity tore off in flakes a quarter of an inch long; in the larger curvature the flakes were half an inch long.

The mucous membrane was mammellonated over most of its surface. Black specks could be seen scattered about all the surface.

Lungs healthy.

Heart softened, the finger passing easily through the walls of the right auricle.

There was a very large deposit of fat in the omentum. Several of the glands near the pancreas were enlarged, and contained a black fibrinous deposit resembling the softening coagulum of an aneurism.

The gall-bladder contained a small quantity of thin dark bile. Not a trace of bile could be found in the intestinal tube, from the cardiac orifice to the anus.

The kidneys were natural. There had been the usual suppression of urinary secretion.

The head was not examined, because it was not affected until shortly before the termination of the case.

Dr. Read saw autopsies of Yellow fever in 1852, in 1854, and in Norfolk in 1855; Mr. Turner, in 1854, here, and in Norfolk in 1855. They all agreed as to perfect similarity of all the Yellow fever livers they had ever seen.

I consider it useless to spin out any further proof. The color compared well and accurately with the lithograph of the Yellow fever executed for me, by Thomas Sinclair & Co., of Philadelphia, which with the two others of the bronzed liver, and the varieties of colors of Bilious fever liver, executed by the same artists, from drawings from nature in my possession, will be sent to the various

members of the profession to whom these articles will be sent in a pamphlet form.

Let us hasten on and ascertain if any of the peculiar colors of Bilious fever can be found at the present day.

A British seaman, in the Marine Hospital, came under my care in my clinic at the hospital, on the 15th of November. He had been aboard of his ship for five weeks. Now frost did not occur until the first week of November, and consequently he had been exposed to the exhalations of the concentrated poison of malaria late in the fall.

Without going into detail, suffice it to say, the case was marked by distinct periodicity, by the pallid anæmic hue so peculiar to malarial fevers, and many cases of which I have pointed out this season to my class, in cases of prolonged malarial intermittent.

There was always a torpor about him, and two days before he died, he sank into a profound stupor. He died on the 22nd, at ten o'clock, P. M., and was examined thirteen hours afterwards.

Body, considerably reduced. Sallow, pallid, anæmic hue.

Head. Very little blood in sinuses or veins, a good deal of serum escaped while taking out the brain.

The arachnoid was distinctly pearl-colored and opaque where it passes over the interstices between the convolutions of the brain; also, where it passes from the nates and testes to the medulla oblongata. I cannot say the effusion was as great as I have often seen. The substance of the brain was anæmic. There was a great many air-bubbles under the arachnoid.

Spleen, usual color, perhaps a little enlarged.

Kidneys, much larger than natural, nothing peculiar inside.

Liver, externally, of a bluish slate color.

Gall-bladder, distended with bile. Undoubtedly enlarged about a third above its ordinary size, when cut into, of a uniform bronze color, easily broken, friable, breaking into small pieces, a good deal of serum in it.

Stomach. Mucous membrane injected, arborescent towards cardiac extremity. Towards the greater curvature, it was of an olive color, with, occasionally, spots of a blackish brown.

The mucous membrane was thickened and corrugated, a piece of white paper rubbed on its coat, received a yellow tinge of bile. A piece rubbed on the cut surfaces of the acini of the liver, also received a decidedly yellow tinge. The lower part of the ileum


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was cut open;—it was perfectly sound and contained yellow bilious matter.

The foregoing facts prove conclusively, that sporadic cases of Yellow fever may occur, having all the symptoms of those during an epidemic, and the same pathognomonic appearances after death.

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ARTICLE II.

*Operation for Strangulated Ventral Hernia during Pregnancy—Recovery.* By HENRY F. CAMPBELL, M.D., Professor of Surgical Anatomy, &c., in the Medical College of Georgia.

Jenny, a negro woman, aged about 80 years, was brought to the Infirmary on the 7th of July, 1854, at one o'clock at night. Her master, a physician, had correctly diagnosticated her disease as Strangulated Ventral Hernia. He said that she had been suffering for nearly forty-eight hours from the constriction. On account of her condition, four months advanced in pregnancy, and also from not having at command the proper appliances and assistants for operating himself, he had concluded to bring her to this place, a distance of forty miles from his residence.

On examination, we found the patient in a condition of extreme depression; her extremities were cold, her pulse very feeble and rapid and she had vomited excessively. There was a tumor in the umbilical region of size equal to a large orange, and the skin covering it, was tumid and somewhat infiltrated from the frequent attempts made by the Doctor for its reduction.

Of course, under the above circumstances, no time was to be lost. We attempted taxis, but finding it offer no hope and having much reliance on the skill of her master, Dr. G. C. Furse, and of his brother, Dr. Furse, who had both tried that mode and failed, we determined, after consultation, to proceed at once to the operation for strangulated hernia in this region.

*Operation.*—Having given the patient a large potation of brandy, and placed her upon a suitable surface of support in the recumbent posture, and administered chloroform to the amount we considered prudent in her low condition, we made an incision in

the vertical direction, the whole length of the tumor. The integument being loose over the tumor and easily sparable from the hernial sac, this first incision was made by raising a fold in the transverse direction, passing a long sharp-pointed bistoury through it, and thus cutting out to the surface. Dissecting carefully through a quantity of fat at the bottom of this incision, brought the peritoneum into view, when we again attempted reduction by taxis; this failing, a small opening was made in the peritoneal sac near the centre, and a grooved director introduced, and upon this, the sac was laid open by incision with a probe-pointed bistoury, first in the upward, and less freely in the downward direction. The intestines being now exposed, and presenting what we considered a sufficiently sound appearance, though much darkened by congestion, we proceeded to dilate the opening through which they had passed, which now appeared rather to *one side* the umbilicus than in the exact situation of the umbilicus itself. In making this dilatation, the fore-finger of the left hand was introduced above the neck of the sac, an assistant supporting and holding out of the way, the mass of protruded intestine; a curved probe-pointed narrow bistoury was then introduced flatwise upon the palmar surface of the finger, and the incision made upwards and rather to the left side to the extent of nearly a quarter of an inch. The ring, (if we may be allowed to transfer here a word which has become a technicality in another region,) which before was hard and rigid, soon yielded to the pressure of the finger after the knife was removed, and the intestine and also the now empty sac, were readily returned into the cavity of the abdomen. The lips of the external wound were approximated and kept together by three sutures, and the part dressed by the application of a towel wet with cold water, which was to be renewed as often as it became warm by contact with the surface of the body.

Either on account of the obtunding influence of her extreme state of exhaustion or from the anæsthetic effect of the chloroform, the patient evinced but little suffering during the whole of the operation. Her state immediately after the operation cannot be said to have improved upon that before it, her depression continuing until an advanced hour on the following morning.

We referred above to the unusual amount of caution we felt it necessary to exercise in the application of the chloroform in this case: this was suggested to us by the fact that early in the admin-

istration of it, the patient manifested decided symptoms of syncope, from which moment, we abandoned its further continuance.

A short time after the operation, an injection of warm water was administered to provoke the action of oil previously given by Dr. Furse. This was followed by no immediate effect; probably the oil had been vomited previously to her arrival at the Infirmary.

The first indication she evinced of returning health, was a decided craving for food; and though her bowels remained long constipated and uninfluenced by cathartics, she did not appear to suffer inconvenience from this state, and continued to convalesce without interruption.

About the tenth day after the operation, at her urgent solicitation, we allowed her to rise from bed. The incision having united firmly, the only support we deemed necessary at first was a small pad and broad bandage, which was afterwards changed for an umbilical truss. This last, however, had to be abandoned after a short time, as the patient was refractory and would not attend to keeping it on in the proper situation, and indeed, from the solid condition of the part, care upon this point did not appear to us as very important.

This patient remained under our care until the 25th of August, during which time, there was no embarrassment of the favorable progress of gestation, which, indeed, as we afterwards learned through Dr. F., continued on to a fortunate parturition, uncomplicated by any untoward incident. At last accounts, she was pregnant again, with but slight threatenings of a return of her former hernial difficulty.

We have the more willingly reported the above case, as we have been for a long time under the conviction that such herniæ are of not infrequent occurrence, a number of this kind having come under our observation.

It is the opinion of Dr. G. M. Newton, Professor of Anatomy in our college, expressed in his lectures on this region, that ventral hernia may be the result of a dilatation of the openings along the linea alba above the umbilicus intended for the transmission of vessels; these openings become enlarged by a deposition of fat around the vessels they transmit, are left patulous on the absorption of the adipose tissue, and thus afford a means of exit to omentum or intestine.

## ARTICLE III.

*A Singular Case of Spasmodic Affection.* Reported by THOMAS J. REAGAN, M. D., of Alma, Texas.

MESSRS. EDITORS—I send you a report of the following case, on account of its novelty, to me at least, and for the purpose of obtaining information from others who have had such cases to treat:

August 27th. Called to see Mrs. C., pregnant for the first time, being advanced some three or four months. She was taken the preceding evening, about midnight, with pain in the left hypochondriac region, which was removed by local applications and anodynes, administered by Dr. Hensun, who was in attendance. She was then attacked by a spasmodic jerking of the muscles of the abdomen, which continued up to the hour of my arrival, 6 o'clock P. M.

I found the muscles of the abdomen only involved, there appearing no arterial excitement, and no pain;—only much wearied by the continued spasms, appearing sometimes as if she would be “*jerked double*,” as she expressed it. I examined her minutely, and could find no tenderness, not even of the spine, as I anticipated. Thinking perhaps it was only an undue mobility of the nervous system, I gave her a full dose of sulphate of morphine, and applied a sinapism to the spine.

There being no relief, but on the contrary spasmodic action increasing, I bled her, and administered calomel, pulv. Doveri, and ipecac, in combination, to be followed by castor oil in the morning, if the calomel did not operate freely. I also directed a mixture of sweet spts. of nitre, ipecac and paregoric, one teaspoonful to be given every three hours, unless productive of nausea, in which event, the dose was to be diminished.

28th, 9 o'clock A. M. Better, having been free from spasms since 10 o'clock on the previous evening. Sulph. quinine with Dover's powders to be given every morning. Since my arrival the spasms have recommenced, and seem to be brought on by the sight of any one to whom she is unaccustomed, or by being touched. Promised to see her if requested.

I learn that the spasmodic twitchings continued until the night of the 30th, when she was threatened with abortion, or at least

had uterine pains, since which she has had no return of the spasms, but has regained her accustomed health.

Was this a case of partial chorea, or was it a development of one of the many nervous conditions to which pregnant females are subject?

I neglected to state that about a month prior she was similarly affected, though in a milder degree.

*Lectures on the Varieties of Continued Fevers and their Discrimination.*

Delivered at St. Thomas's Hospital, by THOMAS B. PEACOCK, M.D., Assistant-Physician to St. Thomas's Hospital, etc.

*Lecture on the Relations of Typhus and Typhoid Fever.*—In my last lecture I described to you the general symptoms and morbid appearances of Typhoid fever. In the present, I propose to inquire how far we are justified in adopting the view advanced at the commencement of the course, that typhus and typhoid are not mere varieties of the same disease, but distinct specific forms of fever.

I have already mentioned, that with the advancement of Medical science, the tendency has been to limit the so-called essential fevers, and to ascribe the constitutional symptoms to local causes, and especially to lesions of the gastro-enteric mucous membrane. Various writers have at different times described inflammation and ulceration of the mucous membrane of the bowels as occurring in fever, but such appearances were only regarded as accidental complications, arising from peculiarities of climate or season, or in particular forms of disease. Thus the characters of the typhoid fever of Paris were well described by Petit and Serres, in 1813, under the name of "fièvre entéro-mésentérique." Broussais,\* however, ascribed much greater importance to the inflammation of the gastro-enteric mucous membrane, regarding it as existing in all cases of fever, and contended that the febrile symptoms were the direct effects of such local disease.

In 1826, M. Trousseau† gave an account of M. Bretonneau's observations on typhoid, as he had observed it at Tours, under the names of Dothinenterie, or Dothinenterite. In 1827, Dr. Bright‡ published several cases, affording examples of the intestinal disease occurring in the fever of London; while Dr. Alison showed its almost constant absence in the epidemic fever of Edinburgh.§

\* Examen de la Doctrine Médicale, Paris, 1816.

† Archives Générales de Médecine, Tome X, 1826, p. 67.

‡ Reports of Medical Cases, Vol. I., p. 178.

§ Edinburgh Medical and Surgical Journal, Vol. XXVIII, p. 223.

In 1829, the first edition of M. Louis's work appeared, in which he illustrated most fully and philosophically all the features of the typhoid fever of Paris, both during life and after death, and in particular demonstrated the constancy of the intestinal disease. Dr. Tweedie and Dr. Southwood Smith, in 1830, reported, however, that in London, while the intestinal disease generally occurred, it was also very frequently absent; and in 1836, M. Lombard,\* who was well acquainted with the morbid appearances of typhoid fever, as he had observed it both in Paris and Geneva, having had an opportunity of witnessing post-mortem examinations of cases of fever both in Glasgow and Dublin, was not a little surprised to find that the intestinal disease, which he had believed to be a constant feature of the disease, did not always exist in the English fevers. The first impression produced by these observations was to raise doubts in Dr. Lombard's mind as to the importance of the intestinal lesion as a constant occurrence in fever, while he still held to the identity of the two forms of fever. Subsequently, however, after he had seen more of the English fevers, he adopted the view that there were here prevalent two distinct forms of disease—typhus, which he regarded as originating in Ireland, and as propagated by contagion by the Irish laborers; and typhoid, which was an endemic disease, precisely similar to that with which he was previously familiar.

In 1836, Dr. Gerhard† published an account of an epidemic of typhus in Philadelphia, in which, while the symptoms and morbid appearances bore entire resemblance to the typhus of this country, they presented very marked distinctions from the typhoid fever, or dothinerterite, which he had before met with in the United States, and which he had found to be in every respect similar to the typhoid fever which he had studied in France; and he hence inferred the specific difference of the two diseases.

Such was the state of the question when, in 1838, the Academy of Medicine proposed for the subject of a prize, the investigation of the analogies and differences between typhus and typhoid fevers.‡ This led to the publication of the Essays of Gauthier de Claubry and Montault,‡ the former of whom contended for the two fevers being one and the same disease, while the latter inferred their specific distinctness.

In 1839, M. Valleix entered into an elaborate investigation of the respective features of the two forms of fever, founded upon the reports of fourteen cases collected by Dr. Shattuck, of Boston, at the London Fever Hospital; and he was led to adopt the conclusion that the fevers of this country embraced two distinct species—one, an essential fever, typhus; the other, typhoid, which is identical with the typhoid fever of Paris.

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\* Dublin Journal, Vol. X., pp. 17 and 101.

† American Journal of Medical Science, Vol. XIX., p. 289.

‡ Mem. de l'Académie Roy. de Méd. T. VII., pp. 167, 184.

In 1839, Drs. Henderson and Reid published a report\* on the typhus fever of Edinburgh, in which they investigated fully and carefully the symptoms of that disease during life, and the appearances of the body after death, and established the almost constant absence of any abdominal symptoms and of the intestinal lesion. On the other hand, they published a communication from Mr. Goodsir, showing that a fever, every way similar to the French typhoid, prevailed endemically in some adjacent districts.

In 1840, Dr. Stewart, who had closely studied both typhus and typhoid at the Glasgow Infirmary, and the latter disease in Paris, published an able memoir,† in which he advocated the non-identity of the two diseases; and in the following year, M. Louis, in the second edition of his work, adopted the same view.

The peculiarities which distinguish the two diseases, and which have been relied upon as indicating their specific difference, may be briefly stated as follows:—

1. The mode of invasion of the two diseases is generally very different. Typhus usually attacks suddenly, and rapidly produces such prostration of strength as to compel the patient to seek medical relief at an early period. Typhoid is usually more gradual in its mode of invasion, and less rapidly advances; so that the time at which the cases come under treatment is usually much later.

2. Typhus can generally be traced to contagion; the origin of cases of typhoid is often very obscure, and the disease, most probably, generally originates in common causes, or, at least, is very much less contagious.

3. Typhus affects persons at all ages, both those in early and in advanced life, though most common during middle age. Typhoid affects chiefly young persons, and very rarely those more than forty years old.

4. The eruptions which characterize the two diseases are different in their form, mode of appearance, and progress; that of typhus assumes the form of a rash, is not, except at the very commencement, elevated above the surface, and has a livid-rose color, and subsequently becomes petechial; that of typhoid consists of several spots, few in number, always elevated, and of a pale-rose color. The typhus rash appears at an early period, follows a regular course, and its disappearance is usually succeeded by convalescence at the end of a few days. The typhoid spots come out a few at a time, and continue to make their appearance in successive crops, and their final disappearance may precede for many days the establishment of convalescence.

5. The predominant symptoms in typhus are ordinarily those of prostration of strength and of cerebral disturbance; while the evidences of gastro-intestinal disorder are of minor importance and

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\* *Ed. Med. and Surg. Journal*, Vol. LII.

† *Ed. Med. and Surg. Journal*, Vol. LIV., p. 289.

frequency, and, indeed, are often absent. The symptoms of disorder of the gastro-enteric mucous membrane are, throughout the progress of typhoid, predominant: while the cerebral symptoms are less constant and usually less severe, and the prostration of strength is also generally less.

6. The duration of an attack of typhus is comparatively short, and is limited to a tolerably definite period. Typhoid is usually of longer duration, and is less regular in its course; some cases being short, others very much prolonged.

7. In typhus, when convalescence is once established, the progress of the case to recovery is generally satisfactory, and true relapses seldom, perhaps never occur. In typhoid, relapses are of by no means infrequent occurrence, and inflammatory affections of the viscera and serous membranes frequently supervene during convalescence.

8. Typhus usually proves fatal during the second week of illness, and rarely after the expiration of the third week. Typhoid, though it may prove fatal at as early a period as typhus, usually destroys life, in from the third to the fifth week, and occasionally death takes place at a much later period.

9. After death from typhus, the only constant pathological condition found in the body, is the altered state of the blood, and the follicles of the intestinal mucous membrane never present any appearances of disease. In fatal cases of typhoid the follicular disease of the intestines is of constant occurrence.

These circumstances certainly afford broad grounds for distinction between the two forms of fever: but it has been contended that they do not prove their specific distinctness.

1st. It has been argued that the absence of the intestinal lesion in typhus is owing to the much earlier period at which death occurs in that disease than in typhoid. This objection does not, however apply; for, though the period of death in typhus be earlier than in typhoid, it is not too early for the intestinal disease to have appeared; while occasionally typhus proves fatal at a late period. Of the cases of typhus to which I have referred in my first lecture, one proved fatal from pneumonia on the thirty-first day from admission, the precise duration of illness not having been ascertained; and I have examined cases which have died on the nineteenth to the twenty first days of illness, without meeting with any evidence of intestinal disease; indeed, after death at the latest period, the solitary and aggregate glands are even less distinct than in cases proving fatal in the earlier stages. Of the cases of typhoid also one died on the seventh or eighth day of serious illness, and yet in that instance the plates were not only greatly enlarged and much inflamed, but in places sloughs had already formed; and I exhibited to you a portion of intestine from a patient who died on the fourteenth day, which exhibited the most extensive and advanced disease. M. Chomel, indeed infers, from the observations



collected by M. Louis and himself, amounting to 92 in number, that in typhoid, ulceration commences in the plates from the eighth to the twelfth or fifteenth day at the latest.

2ndly. It has also been contended that the peculiarities of the eruption on the skin, and the presence or absence of the intestinal affection in the two forms of fever, may depend on the relative vigor and age of the subjects attacked;—that typhus is a disease of the young and robust, typhoid of the aged and infirm or debilitated. But this is not the case, typhus appears sufficiently frequently in young subjects to prove its features to be similar in them and in the aged. The disease also may be conveyed by contagion to persons under the most diverse conditions, and yet in all, however its malignity may vary, its general features remain the same.

3rdly. It has been supposed, that the disease of the intestinal follicles is only an accidental complication, superinduced by peculiarities of local climate or epidemic influence. This argument would possess much force were the two diseases never found to prevail coincidentally in the same localities—if the fever which prevails in one locality were always typhus, as is ordinarily the case in Edinburgh; or always typhoid, as in Paris. It fails, however, entirely to explain, how, in other localities, as in London, for instance, we sometimes meet with one and sometimes with the other form of fever; and each of them, instead of being modified or displaying certain intermediate gradations, is found to present its clearly defined and characteristic features. For the establishment of the latter point we are indebted to Dr. Jenner,\* who for a period of three years conducted a most elaborate investigation into the history, symptoms, and morbid appearances in the cases of fever treated at the Fever Hospital; and he has conclusively shown that the typhus of London is as distinctly marked as that of Edinburgh, and the typhoid as that of Paris. In this state of the question it must, I think, be admitted, that the argument preponderated in favor of the non-identity of typhus and typhoid; but Dr. Jenner was able to furnish still more conclusive evidence of their distinctness. He has shown, that during the years 1847, 1848, and 1849, in all instances in which two or more cases of fever were admitted into the Fever Hospital from the same house, with one solitary exception, whatever was the character of the case first received, such also was that of the cases subsequently admitted; and he has justly concluded, that if the diseases were not propagated by separate contagions or poisons, there would certainly have been numerous exceptions to this rule, instead of the solitary one I have referred to. This, too, could hardly be regarded as an exception. It was the case of a boy received laboring under typhoid after his father had been previously admitted with typhus;

\* *Medico-Chirurgical Transactions*, Second Series, Vol. XV. 1850, page 28.

but the boy was from home till after his father's removal to the Hospital.

The constant absence of any evidences of intestinal disease in typhus was confirmed by a report published by Dr. Reid\* of the pathology of fever in Edinburgh in 1842, which embraced no less than 100 examinations; and in 1843† by one of myself, detailing the results of examination in 31 other cases. These several reports give a total of 161 cases of fever examined between the years 1838 and 1842, in only eleven of which was the follicular disease found, or in about 1 in 14 cases. Dr. Bennett, however,‡ in 1846 and 1847, found the follicular disease more frequent in Edinburgh; or, in 19 out of 63 cases examined after death; but, as this report is not accompanied by any statement of the features of the cases during life, so far from invalidating the general conclusion, it only proves that, at the period in question, typhoid was usually prevalent in Edinburgh. Of the cases of fever in which the intestinal lesion was found, examined by Dr. Reid and myself, all were admitted into the Infirmary from districts adjacent to Edinburgh, and not from the town itself; or, if so, had come to Edinburgh laboring under the disease.

After having had my attention for several years specially directed to these points, I have seen no exception to the rule, that the fever characterized by the general features and eruption of typhus is unattended by any lesion of the intestinal mucous membrane; or that the equally marked disease characterized by the rose-spots of typhoid is as constantly connected with the follicular disease. These facts have also recently been confirmed by Dr. Wilks from his experience at Guy's Hospital; and similar evidence has been brought forward by other writers both in this country and in America.

At the time when Dr. Jenner's paper was read at the Medico-Chirurgical Society in 1849, I was induced to look over the notes of the fever cases which I had treated at the Royal Free Hospital, to which institution I was then attached; and I found that, though these observations had not been collected with any reference to that investigation, in every instance where two or more members of the same family were admitted into the Hospital, the character of the fever corresponded in all the cases. Since this time, while I have been connected with St. Thomas's Hospital, I have equally directed my attention to this question. I have seen many instances in which several persons of the same family or from the same house, have been admitted with fever, or have been laboring under fever, and have found no exception to the rule, that all the cases in such instances corresponded in character. Very recently we have had several sets of cases of typhus occurring in members

\* Lond. and Ed. Journal, 1842.

† Lond. and Ed. Monthly Journal, 1843.

‡ Ibid. 1848, N. S. Vol. II., p. 299.

of the same family or in the same house; as, two patients under my care in Jacob's; three of a family under Dr. Bennett, Dr. Bristowe, and Dr. Goolden; and two of a family under Dr. Barker and Dr. Goolden. Yet in all these sets of cases the character of the fever was identical.

We have also in the General Hospitals, the opportunity of observing what in the Fever Hospital could not be seen,—patients laboring under other diseases becoming affected by typhus, from their vicinity to typhus patients. Of the cases to which I have referred, in six the disease was thus contracted, and very recently three or four similar instances have occurred. In these cases the character of the fever always corresponds with that of the case from which the others are derived. I have, indeed, seen typhus affect persons under the most diverse circumstances,—old and young persons, medical students, nurses, persons in depressed state of health, from unhealthy districts of town, and others in robust general health, and fresh from the country; but I never observed any material modification of the character of the disease, though, of course, its intensity or malignity will vary. If, however, the poison of typhus and that of typhoid were the same, it is impossible to doubt that, instead of all the cases being characteristically cases of typhoid, some would be cases of typhus and some of typhoid; while others would present more or less of the characters of the two diseases.

I have recently treated a case, regarded as an ordinary instance of typhoid, and which passed favorably through the disease, and recovered, so that the patient was able to walk about the ward; he then was again taken with fever, having the usual features of typhus, and characterized by a typhous rash on the skin. In this instance, the patient lay in a bed near one occupied by a typhus patient, and appeared, during his convalescence from typhoid, to have contracted typhus. Facts of this kind must be regarded as strongly upholding the doctrine of the specific difference of the two diseases; for it is well ascertained, that both affections—like the eruptive fevers—confer, to a great degree, immunity from subsequent attacks.

Lastly, Dr. Jenner has shown that typhus and typhoid may be epidemic, at the same time, or the one disease may decline, while the other is becoming more prevalent, or *vice versa*; and we have continual opportunities of observing this to be the case. Often you will find many cases of typhoid in the Hospital, but only one or two of typhus; at other times, and such is now the case, the typhus cases will be much the most numerous.

With these various facts before us, there can be no longer much hesitation in adopting the conclusion, so ably illustrated, and, I think, fully established by Dr. Jenner, that typhus and typhoid are specifically distinct diseases. There may, it is true, be sometimes a difficulty in deciding as to which class a given case should be

assigned. The typhus eruption may be more discrete than usual, the spots may be more distinctly defined, and when they first appear may be usually elevated; and thus, at first sight, the eruption may bear a very close resemblance to that of typhoid. On the other hand, the eruption of rose-spots in typhoid may be mingled with a petechial eruption, which may assimilate it to the typhus rash; or, from the presence of other eruptions on the skin, the characters of either rash may be disguised. There may thus be difficulty in deciding as to the true nature of the eruption, but this difficulty will generally vanish on careful inspection, or, at any rate, on watching the progress of the case. I do not recollect to have ever failed to make up my mind as to the kind of eruption at the time I first saw the patient; or, on further examination a day or two after, to have found that the opinion first formed was incorrect. Were, however, the difficulty of distinguishing the two diseases much greater than it really is, this would not prove their identity; it would only show, as contended by M. Louis, that they formed no exception to the rule, that most diseases, even some of those which are the best understood, are occasionally difficult to discriminate.

While, however, typhus and typhoid are distinct diseases, they are, nevertheless, very closely allied. This, at first sight, might scarcely appear to be the case; for typhus presents the type of an essential fever, unconnected with local disease; while, typhoid is always associated with the intestinal affection. This difference is, however, more apparent than real; for in typhoid, as I have before mentioned, there is not any certain or constant relation between the intensity of the general symptoms and the amount of local disease. The intestinal affection can, therefore, only be regarded as one symptom or result of the essential disease. Both affections are thus closely allied to the eruptive fevers, while they are markedly distinct from the intermittent and remittent fevers dependent on malaria.

But it may be asked, what is the advantage of thus elaborately drawing the distinction between these two forms of fever? Much every way. In the first place, though the practical application should not be now apparent, the extension of our knowledge would yet be desirable; for it cannot be doubted that all advances in our acquaintance with diseases must ultimately prove useful in practice.

But the distinction between typhus and typhoid is one which is full of importance. The prognosis in the two diseases is different; and, though the principles which should guide our treatment may be similar in both, they must be greatly modified in their application by the peculiar character of each.—[*N. Orleans Med. News and Hosp. Gaz.*

*The Effects of Dentition on Nursing Children.* By M. TROUSSEAU. (Clinical Lectures delivered at the Hotel Dieu. Translated for the Boston Med. and Surg. Journal, from the *Gaz. des Hopitaux*, Dec. 1855.

REMARKS.—The subject of the following article, we consider of such deep interest to the practitioner, and the views therein expressed embody, in the main, so much of truth in regard to this important period of infantine existence, that we deem them worthy of something more than simple republication.

In order to form a proper appreciation of the subject of Dentition, we must look at this period in a somewhat different relation from those in which M. Trousseau has viewed it in the present article, viz., in its relation to the *Nervous System*. In a former number of this Journal (June, 1850, p. 321\*) we had occasion to discuss, at length, the influence of Dentition in producing the Cholera Infantum of this period, and the observation of the six years, elapsed since that time, has only served to confirm the views we then expressed in reference to the agency of the nervous system. It is in this relation, we apprehend, that most of the interest attaching to this period is to be found; and, in our opinion, all the evils resulting, as the effects of teething, are referrible to this system, in one or the other of two ways: the irritation may be transmitted from the gums, 1stly, through the *cerebro-spinal* system to the voluntary muscles, and give rise to the convulsive affections and paralysis of this period; and 2ndly, the irritation may be transmitted from the gums, through the *ganglionic* system of nerves, to the various vascular organs, as the lungs and liver, and secretory surfaces, as the gastric and intestinal mucous membrane—giving rise to congestions, in the one case, and excessive secretion, diarrhoea and cholera infantum, in the other. “A few days before it (meaning diarrhoea) begins,” says M. Trousseau, “the infant is restless, wakeful, cries violently, sucks its fingers, bites the nipple, refuses to feed, if it takes supplementary nourishment, and sometimes will not nurse. Its gums are red, and there is very evident prominence at the points which the teeth are about to pierce; there is cough, the voice is changed, the mucous membrane of the mouth is irritated.”

Here it will be observed that we have unmistakable evidences of local irritation in the gums, which we know are supplied by

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\* “An Essay on the Influence of Dentition in Producing Disease.”

branches of that most exquisitely sensitive of all sensitive nerves, the fifth pair; if we admit the principle of reflex action, we must recognise here a competent cause, considering the impressible character of the infants nervous system, for *convulsive* phenomena. On the other hand, we may trace a connection between this local irritation and the *diarrhœa* succeeding it, in an analogous manner, taking into view the intimate connections existing between this fifth pair, and the nerves of the ganglionic nervous system, from which the intestinal mucous surfaces receive their secretory endowments.

We have been thus careful in pointing out the manner in which we think this local irritation may produce the convulsive symptoms, and also even the increased secretion from the mucous surface of the bowels and the *diarrhœa*, in order to give it what we consider its proper amount of importance, and to direct attention to this, as the chief source of those difficulties, calling for early and continued care.

Throughout the whole of his communication, M. Trousseau does not refer once, to the measure of incising the gums, as a means of relief. This, it is needless to say, is ever in this country deemed an important means of relieving the local irritation, but one we think too often neglected. Opiates also, as a means of quieting irritation may be mentioned, but we have found great caution necessary in their administration.

We have little doubt, that the character of the symptoms and the phases, assumed by the diseases incident to dentition, are much modified by climate. In those regions where paroxysmal diseases prevail, the symptoms will partake of the general character of these diseases, and become, in a great degree, amenable to the influence of quinine. This is more especially true of the *convulsive* diseases attending dentition, which manifest a great disposition to *recur*, unless treated with quinine, after the manner of paroxysmal fever.

"It has been said," again remarks our author, "that convulsions are common with infants whose bowels are constipated, but do not attack those who have *diarrhœa*. This is not true. Convulsions almost always *accompany* *diarrhœa* and are prevented by a good state of the bowels."—From this opinion, our own observation, and doubtless that of most Southern practitioners, would incline us to dissent. We have uniformly found, where there was much irritation in the gums, and this unaccompanied by *diarrhœa*,

or at least a loose state of the bowels, that the cases were more liable to suffer from convulsions, than when the opposite state of the bowels existed.

We have been thus far led into restating some of our views in regard to this subject, in connection with this excellent lecture of M. Trousseau, more because it has met with, from us, such hearty approval, than from any disposition to criticise it; and still more, from the conviction, that the general outline which may be given, almost of any disease, undergoes modification as we change the climate, and that, as we mention above, this is more especially true, in regard to the diseases of dentition, which we think, in our latitude, present many traits which we may look for in vain, in the reports given of them in other climates. H. F. C.

"The most elementary questions in medicine are often the least understood. It would seem, at first sight, that we need not much concern ourselves about the trifles which daily swarm beneath the feet of the practitioner; but remember that Stoll has written a chapter entitled *De quibusdam magni momenti minutiis*, and learn early to neglect nothing.

"The infant has twenty teeth, the adolescent twenty-eight, the adult thirty-two. The evolution of the twenty teeth of the infant is not completed before the thirtieth to thirty-sixth month; but they are only temporary, for, at the age of seven years, he begins to lose them, exchanging them for others which are more durable. This process is normally accomplished at thirteen or fourteen years. Except the great king, who formed an exception to every thing, and who was born, it is said, with two teeth, the infant comes into the world with defenceless jaws, and it is not till towards the eighth month that the first milk teeth appear.

"But since the laws of nature are capricious, it often happens that one infant has teeth at four months, while another has none at the end of a year; hence no limits can be fixed. Generally, the two middle incisors of the lower jaw first appear, and I anticipate a stormy dentition whenever I see a child begin that process by the upper teeth. These two first teeth appear together, with an interval of twenty-four hours, forty-eight hours, four days, and sometimes a week between them, but always *together*, remember, and they are the only ones which present themselves in this manner. Six weeks or two months afterward, the two superior middle incisors make their appearance, not together, but at the distance of eight, fifteen, or thirty days from each other. The process of dentition is thus very rapid for the first two teeth, and more slow for the others.

"Meanwhile, two other teeth are about to protrude—the lateral

incisors of the upper jaw—very soon, one or two months after the upper middle incisors. Towards the end of one year the child has six teeth, and whereas he began with two lower, he has finished with four upper.

“The teeth of children appear in *groups*; *dentes in infantibus catervatim erumpunt*: first group, two inferior middle incisors, at about eight months: second group, two superior middle incisors, towards ten months; third group, two superior lateral incisors, at one year, more or less; fourth group, two inferior lateral incisors, and the first four molars (six teeth in this group, from fourteen to eighteen months); fifth group, four canines, from eighteen to twenty-four months; sixth group, four second and last molars, from thirty to thirty-six months.

The canine teeth appear after the infant has twelve teeth, and when he is from eighteen to twenty-four months old; their evolution lasts from two to three months, sometimes for ten months; they then take their places, at the age of three years; when those of the last group have pierced the gums (the four second molars,) the process of dentition is finished.

It is not without object that I have spoken of groups; you will see that a knowledge of this arrangement is very important in respect to weaning. It is a fact worthy of consideration, that immediately after a group of teeth has appeared, there is an interval of rest for the child. Profit, then, by this interval to wean, for the moment is propitious. Do you know what is commonly done? Children are weaned indifferently when they have two, seven, nine, eleven, fourteen teeth, no attention is paid to the number. Now, I entreat you to pay close attention to this, otherwise you will lose your little patients by that terrible affection of the intestines, *cholera infantum*.

You will often be consulted as to the time for weaning; never give an opinion, therefore, until after a scrupulous examination of the state of the dentition, and do not authorize the mother to wean her infant until it has six, twelve, or sixteen teeth. Good practitioners will never permit a child to be weaned after the evolution of the first two teeth; the patient is too young; he is ordinarily but eight months old. It is only by careful management that you will succeed after the eruption of the third group; still, if you are strongly urged by the parents, consent, for you have before you a month or six weeks of respite before the evolution of the fourth group. Allow it, then, in case of necessity, but never forget that the child has only six teeth, that he is only a year old, and that artificial alimenation will not always be successful.

“The most favorable period for weaning is, beyond all doubt, the interval separating the fourth from the fifth group. The child, in fact, is armed with twelve teeth, eight incisors and four molars, and he has before him a tolerably long time of rest, about two months, during which there is no reason to dread any intes-



tinal trouble; and when the canines begin to appear (which group causes the greatest danger in its evolution,) he is accustomed to his new diet, and prepared for the crisis which he is about to undergo.

"Learn, then, to wait until after the fourth group, before weaning. If the health of the mother or nurse, or the circumstances of the family, oblige you to authorize an early weaning, always see that there are six teeth; but if, on the contrary, you are not obliged to yield to considerations of this nature, do not allow weaning until you can count twelve.

Do not imagine that things always go on so regularly. You will see children who have the molars before the incisors, or the superior incisors before the inferior incisors; for although dentition ordinarily takes place in the way I have described, it is no less true that it frequently presents irregularities which greatly perplex the physician who is earnestly watching for an interval of repose. In such a case, do the best which the circumstances will admit of; examine the state of the gums, and have the child weaned immediately after the complete evolution of a tooth, which will probably be followed by a period of repose, during which you will have leisure to guard against evil consequences.

"Among the affections which are common to dentition, the most important, the most grave, and the most obstinate are seated in the alimentary canal. A few days before it begins, the infant is restless, wakeful, cries violently, sucks its fingers, bites the nipple, refuses to feed, if it takes supplementary nourishment, and sometimes will not nurse. Its gums are red, and there is a very evident prominence at the points which the teeth are about to pierce; there is cough, the voice is changed, the mucous membrane of the mouth is irritated. From the moment the child has two teeth, the neighboring gums become inflamed, and the protruded teeth will be surrounded by a ring of red and swollen gum.

"If you give mercury to a person who has no natural teeth, but who wears an artificial set, you will not see salivation nor mercurial stomatitis follow. But if the patient have a single tooth remaining which has escaped destruction, the effects of the mercury are manifested around it. The gum surrounding the tooth will inflame, while the rest of the mouth will be free from disease. The same is true with regard to the first two teeth; their eruption causes no affection of the gums, which, however, swell and become red with the evolution of the second and succeeding groups.

"In almost all children the process of dentition is accompanied with diarrhoea. This is sometimes moderate, consisting of three or four dejections only, daily, but is frequently excessive, with green stools, resembling chopped herbs or grains of curdled milk, with glairy, and sometimes bloody matter. In certain cases marked tenesmus manifests itself, prolapsus of the rectum. These symptoms, which precede, by several days, the eruption of the

tooth, often continue, and even lasts until the entire group penetrates the gums. If the diarrhoea does not cease, you are aware what treatment should be adopted, and what attention should be paid to the diet. You will restrain and mitigate it as much as possible.

"Would you advise weaning during this diarrhoea? No, unless the nurse's milk seems to keep up the intestinal flux.

"During the summer season, the injurious effects of dentition are chiefly directed towards the intestines, very rarely upon the air passages. Intestinal derangements, fever, peripneumonic catarrh, and other morbid pulmonary manifestations, occur in the winter.

"I must warn you against a popular prejudice, which I advise you to oppose on every occasion that offers. You will hear it said again and again, that diarrhoea is beneficial to children; believe it not, for too often it will cause the death of your little patient. Diarrhoea prepares the way for chronic enteritis, and chronic enteritis debilitates and destroys its victims. On the contrary, restrain the intestinal flux, and you will find that the other symptoms are much better borne.

"In the same way, it is considered highly advantageous to leave untouched the filth which covers the head of a new-born infant. This ridiculous prejudice no longer exists in England or America; let us do away with it here.

"When, during dentition, the evacuations are merely more loose than common, without amounting to diarrhoea, this slight derivative effort requires no interference, but it should not be allowed to continue too long.

"It has been said that convulsions are common with infants whose bowels are constipated, but do not attack those who have diarrhoea. This is not true. Convulsions almost always accompany diarrhoea, and are prevented by a good state of the bowels.

"I call your attention particularly to the diet, as a point of the greatest importance. If you neglect caution in this respect, you will have diarrhoea, followed by enteritis, serious indigestion, and eclampsia. Nothing is more common than severe cases of indigestion, aggravated by enteritis, and leading to convulsions; and nothing is more alarming to the parents, who generally lose their senses, and while the domestics or the neighbors run to bring the doctor, the mother, following the advice of some officious gossip, pours hot water over the hands and feet of her infant; he is scalded, and dies from the effects of it. This reminds me of what occurred to an eminent brother-physician, Professor Marjolin, during the course of a typhoid fever, which threw him into a state of profound stupor. They applied to his legs napkins wet with water at a temperature of 158° Fahr. Large eschars followed, which were not completely healed for several months.

"If convulsions occur, the less you do, the better. The attack

indeed, is most frequently over when you arrive, and although there may be a slight recurrence once or twice during the day, the remembrance of it is only left, the day after. If there have been indigestion, administer a laxative, in order to expel any undigested food; allow the child to nurse but little, give it water with some albuminous substance in solution, and, in an urgent case, a bath, and you will soon see the alarming train of symptoms disappear. Almost any treatment succeeds in the majority of cases, even the infinitesimal doses of that absurd system—homœopathy."

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*On the Effects of Belladonna in Arresting the Secretion of Milk.*  
By R. H. GOOLDEN, M.D.

As nothing is read with greater interest by practical men than your reports of clinical facts, I hope I may claim a corner in your journal, at as early a date as convenient, to relate the following cases, illustrative of the effect of belladonna in arresting immediately the secretion of milk.

E. J—, aged twenty-eight, was admitted into Anne's Ward, St. Thomas's Hospital, with severe rheumatic fever. She had been ill four days, with a child at the breast four months old. At the time of her admission she had swelling and acute pain in both wrists, right elbow, both knees, and left ankle. The knee-joints were distended with synovia, and erythematous patches were on the skin of the knees, ankles and wrists. She was bathed in perspiration, and the secretion of milk was abundant. According to the regulation of the hospital, the child was removed; indeed, from her helpless condition, it was necessary, considering the difficulty of attending to an infant in a ward with other patients. Soon after her admission she took eight grains of calomel and a grain and a half of opium, followed by a senna draught; and one scruple of nitrate of potassa, ten grains of bicarbonate of potassa, and half a drachm of spirit of nitric ether, in peppermint water, every four hours. The joints were covered with cotton wool.

On the following day, at two o'clock, I found she had been freely purged; the joints were in nearly the same state. She had had no sleep. The breasts had become tumid, hard, painful, knotty, and extremely tender. The superficial veins were distended. Some milk had been drawn, but the process was attended with great pain, and we could not listen to the heart's sounds on account of the tenderness.

A milk abscess, in complication with rheumatic fever, was of all things to be avoided, and unless the secretion could be at once arrested, it appeared inevitable. In this state I recollected that I had somewhere met with an observation (but I cannot remember whether it was in an English or foreign journal) that atropine

applied externally to the breasts would dry up the milk; and thinking it reasonable, I caused the areola of the breasts to be smeared with extract of belladonna, in the same way that it is used to dilate the pupil of the eye. I likewise ordered the addition of half-drachm doses of colchicum wine, knowing that whenever milch cows eat the meadow saffron in the pasture, they immediately become dry; and though I have not much faith in colchicum as a remedy in rheumatic fever uncomplicated with gout, there could be no objection to its use, as it has the sanction of much higher authority than my own.

On my third visit the following day, the first inquiry was about the breasts. They were all right. But was it the colchicum or belladonna that had relieved them? The extract was used before I left the ward; before the mixture was given, the secretion of milk had been arrested and the breasts had become soft. The rest of the case has no further special interest. I will only state that there was no heart affection, and that the fever, though very severe while it lasted, was of short duration, and the patient left the hospital quite well in fourteen days.

The second case that occurred to me was uncomplicated with any disease, and such as would usually fall under the care of the accoucheur rather than the physician:

A lady, the wife of a clergyman, was travelling with her husband, and in order to accompany him, had weaned her baby, (then seven months old). Happening to be at Oxford at the commemoration festival, he came to me in great trouble, telling me that his wife had done a foolish thing in weaning the child, and that they were now arrested in their progress in consequence of the state of her breasts. They were tumid, very tender, painful, and hard, with large superficial veins, and the milk had been drawn with difficulty several times, with temporary relief. I recommended the application of the extract of belladonna to the areola, desiring them to send for a medical practitioner if the inconvenience did not immediately subside, or unless she felt quite well. A few days brought me a letter, giving a very satisfactory account, and thanking me for what she was pleased to call my wonderful prescription. Within two hours she was perfectly relieved, the milk absorbed, and (what is very important) there was no fever or other inconvenience attending the sudden suppression of the milk; and instead of taking the opening medicine I had prescribed for her, she continued her journey the next morning.

I have not been able to discover that the fact that belladonna is available for the purpose of arresting the milk secretions is at all generally known—certainly it was not to several accoucheurs in large practice of whom I have inquired. The fact is important, if true, for then milk abscesses will become a matter of past history, and probably many diseases of the breast may be rendered less complicated by its use.

The two cases I have detailed are not sufficient to prove that it will always be either successful or safe, but they render it highly probable that it is so. My assertion may have a temporary interest, and soon be forgotten, and the opportunities of observing milk abscesses, and their early progress, do not occur with such frequency to a hospital physician, even in private practice, as that I may hope to bring together a sufficient number of facts to lay them before you. The fact has already been noticed, and if you will invite others who have more opportunities of special observation to try the experiment, and give you *short extracts* of cases bearing on the subject, with the names of observers, I am sure you will confer a favor on the profession.—[*London Lancet*.

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*Extra-Uterine Pregnancy of Four Years' Standing, the patient in the interim being twice delivered of a healthy living child.* By A. W. HEISE, M. D., of Addison, Illinois.

In November, 1855, I was called to visit Mrs. Yungels, residing one mile east of Aurora, and thirty miles west of this place. Upon my arrival I found the patient, a woman of robust constitution, 36 years of age, to have been ten days since delivered of a healthy male child. The three or four days following delivery she was quite well, since which time she has had a chill every day, followed by fever and profuse perspiration. Has had the usual lochial discharge, but no secretion of milk; pulse 100 to 110; tongue red, dry and hard; no appetite. On applying my hand to the abdomen, which is painful and irritable, I find an enlargement resembling a hard tumor, which is moveable, and not connected with the integuments commencing in the umbilical region about three inches above the umbilicus, extending downwards parallel with the linea alba to the os pubis, filling three-fourths of the lumbar and iliac region of the right side. Left of the linea alba it seems to be perfectly free from any morbid growth. Examination per vagina shows the uterus in situ, contracted; the os uteri somewhat enlarged, hot, dry and painful; vagina natural. By moving the uterus and placing the other hand over the tumor, the motion of uterus affects the tumor, and *vice versa*.

Upon inquiry, I was informed that, four years since, the patient supposed herself pregnant, experiencing the usual symptoms attendant upon gestation for a period of ten months, during which time the abdomen constantly enlarged, particularly the right side, which was hard and painful, rendering her unable to lie upon it after the third month. At the end of ten months, labor commenced, and a midwife was summoned, who, after expressing her fears that the child did not "lay right," declared it was yet out of her reach, the os uteri not at all dilated, would not be delivered yet, &c.

Bearing-down pains, however, increased, and were finally re-

lieved by a discharge of a large quantity of watery matter having the appearance of beef brine, followed by coagulated blood. This not only very much relieved the patient, but diminished the size of the abdomen, and the mid-wife assured her she had suffered only from obstructed menstruation, and would soon recover. The abdomen gradually decreased in size, for the space of three weeks, when the lochial discharge ceased, and with it the diminishing of the bowels, leaving still an enlargement of the right side, which she was yet unable to lie upon.

Finding no alteration in the tumor from that time, four months afterward she consulted a physician, who told her he could not ascertain the nature of the tumor; could do nothing for her without an operation, which, so long as she suffered so little pain, and it did not enlarge, he would not advise.

She soon became *enciente*, and in time was delivered of a large, healthy child. Parturition was easy, and she soon regained her usual health, having experienced no unusual symptoms, with the exception of the total absence of any secretion of milk. The tumor had been painful during confinement, but otherwise retained its former appearance.

Eighteen months afterward, she again became pregnant, and in November, 1855, was once more delivered of a healthy male child—both are now living.

Dr. Young, of Aurora, who attended her, says he observed nothing unusual in her case; did not notice any enlargement of the abdomen: called again and discharged her as doing well.

On the tenth day after her confinement, I first saw the patient, and found her as above stated.

I prescribed those medicines which were indicated, directed emollient poultices to the abdomen, and left, with directions that if the patient did not improve, or there was any alteration in the tumor, to inform me. Thought the tumor might be an enlargement of the right ovary, and that when the irritation of the uterus subsided, and the fever abated, it would cease to be painful, and she might again enjoy her usual health.

Heard no more from her until May 5, 1856. I was summoned to see her again. I found her much emaciated, exhibiting a great degree of nervous excitability; pulse 90, small and irritable—has suffered much from pain since I saw her, having been constantly confined to her bed. The tumor at the umbilicus has ulcerated, and discharges a very offensive fluid. Through the orifice, which is nearly the size of a half dime, a bone has protruded; another now closes the opening.

The case was now plain, and I advised an immediate operation. Dr. Young, of Aurora, was called to assist, and upon his arrival, requested to have his friend, Dr. Allaire, of Aurora, present.

Adhesion of the peritonium had taken place around the orifice, to the extent of from three to three and a half inches. I made an

incision of about three inches toward the right lumbar region, and commenced at once to extract the bones. The flesh was decomposed, but the skeleton was perfect, and was of the size of a foetus at the seventh month, though the bones appeared to have the firmness of two years' growth. Its extraction through the rather small orifice was tedious, in which Dr. Allaire very kindly and effectually assisted,—Dr. Young, meantime, quieting the patient by administering chloroform. The bones of the head and pelvis were too large to pass through the incision, until they were severed by a strong pair of scissors. We succeeded in removing all the bones, together with a mass of semi-decomposed matter from the sac. The sac, which was formed of a gristly substance, and so hard as to almost resist the passing of the bistoury, seemed to have contracted close around the foetus, and evidently had performed the office of placenta and uterus, in being connected with the latter.

The wound was simply dressed with lint, a bandage applied, and the patient directed to lie in a position to facilitate the discharge. She was left under the care of Dr. Young, and up to May the 10th was doing well.—[*North Western Med. and Surg. Journal.*]

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#### Uncontrollable Vomiting in Pregnancy.

REMARKS.—In connection with the above caption, we will record a remedy which we have not, elsewhere, seen reported. Our excellent friend, now Reverend Dr. C. T. Quintard, of Randolph, Tennessee, formerly Professor of Physiology and Pathology in Memphis Medical College, having been perplexed for a long time, with a case of obstinate vomiting during pregnancy, resorted to the expedient of *cauterizing the fauces freely with a solution of Nitrate of Silver*, about 15 grs. to the oz. of water. The experiment was entirely successful.—We can very readily explain this result: The nerves supplying the fauces are the *excitor* nerves of vomiting; from the long continued effort, they had become permanently irritable; the cautery obtunded their irritability, and their corresponding *motor* branches, from the pneumogastric, in the stomach, were no longer provoked to act. *Query*.—May not the above, be the pathology of protracted vomiting, under *other* circumstances, and might not a similar measure act as efficiently in relieving it?

H. F. C.

The attention of physicians has of late been directed towards the subject of excessive vomiting during pregnancy, with a view to discover some more efficient mode of treatment than that usual-

ly employed for this unpleasant and sometimes alarming symptom. Although the cause of the vomiting has always been recognized as seated in the uterus, yet the means at our disposal for ascertaining the condition of that organ having until of late been limited, it has been necessary to treat the disease as one of the stomach, and to address remedies chiefly to that organ. It is needless to say that in many cases this mode of treatment is ineffectual. Instances now and then occur in which, in spite of the employment of prussic acid, creasote, alcalis, acids, narcotics, leeches, blisters, sinapisms, the vomiting still continues unabated, or increases sometimes to such a degree as to render necessary the artificial induction of abortion as the last resource, and that a doubtful one, in order to save the life of the woman, if indeed that result does not follow spontaneously the violent contractions of the stomach.

It is now well known that in these cases there is often something more than the presence of the ovum in the uterus, and the enlargement of this organ, to account for the sympathetic irritation of the stomach. The speculum often reveals various morbid conditions of the cervix, and since the removal of these conditions, or their diminution, by appropriate local treatment, is followed by a cessation or diminution of the vomiting, it is fair to attribute this exaggeration of a natural phenomenon to a morbid condition of the parts which are concerned in its production. An interesting case confirming this view, which we see reported in a foreign journal, suggested to us the above remarks, and believing that it may serve to call the attention of others to this interesting subject, we give a brief abstract of the paper, which was read by Dr. Brian, before the French Academy of Medicine.

A woman aged 25, of good constitution, became pregnant for the third time at the beginning of March, 1856. In the middle of April, vomiting began and continued, gradually increasing in frequency and violence. About the first of May, the patient was obliged to keep her bed. The stomach soon became incapable of retaining or digesting any thing. Severe gastralgia, thirst and constipation followed, combined with spasmodic movements, profound depression and emaciation. After all remedies which could be thought of had been tried, a vaginal examination showed that the uterus was completely retroverted, and incarcerated in the hollow of the sacrum. It was disengaged from this situation, and placed in its normal position. Immediate relief followed, and the vomiting ceased, to return no more.

It does not absolutely follow that because obstinate vomiting is sometimes owing to a definite source of irritation seated in the uterus, this effect should always follow such local cause. Women in whom there is every reason to believe that the so-called ulceration, or the granular condition of the cervix exists, may go through pregnancy without unusual vomiting, just as these same conditions are sometimes found after death in persons who never suffered



during life from leucorrhœa, bearing-down pain, or other troubles usually associated with them; but the fact that the two sometimes, perhaps often, stand in the relation of cause and effect, is a sufficient reason why the uterus should always be examined in every case where the vomiting can not be controlled by general remedies, that any abnormal condition may be rectified by appropriate treatment.—[*Boston Journal*.]

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*Subcoracoid Luxation of the Humerus, with laceration of the Axillary Artery and Paralysis of the Arm.* By T. ROUYER.—(Rev. Méd. Chirurg., Sept. 1855.)—Translated for the Western Lancet, by Dr. KRAUSE.

In May of 1855, the author had the opportunity to observe in the clinical department of Nelaton, a luxation of the humerus with complications so rare, that he regards the case itself, as well as the remarks by Nelaton, worthy of publication.

On the 15th of May a man was admitted to the *Hospital des Cliniques*, who had received a severe injury 75 days before. A Subcoracoid luxation of the humerus could at once be diagnosed on the left paralyzed arm. The patient, a workman, stated that his left arm when flexed and elevated, had been caught in the turning-wheel of a machine. The wheel pressed his body against the axle-tree and pulled his arm violently. Immediately after the injury he was brought to the hospital of Marly, where the surgeon did, not attempt to replace the dislocated limb until after 22 days. He did however, not succeed even with the power of 10 assistants. During the next eight weeks, neither the position of the arm nor its usefulness had improved. On examination the shoulder was found remarkably flattened. The head of the dislocated humerus could distinctly be felt close under the coracoid process. The acromion appeared very prominent and a depression below it. The anterior wall of the axilla had a less extent, than on the other healthy side. Though some writers set down a prolongation of the anterior axillary wall as a symptom of subcoracoid luxation, the inserting point of the pectoralis major muscle being lowered with the dislocated head of the humerus, yet this sign holds good only for recent luxations. For in old cases the muscle becomes atrophied, the anterior wall of the axilla proportionally shortened. The head of the humerus felt uneven so much so as to render stalactiform deposits of bone on it very probable. In front of the head of the humerus the brachial plexus of nerves was situated, a pressure on which caused stinging pains extending along the arm. In following the course of the arteries down the injured arm the axillary artery was distinctly perceptible from the clavicle to the head of the humerus below which pulsation ceased. It was wanting also in the brachial, radial and ulnar arteries. About the acromion be-

neath the skin a large pulsating artery was felt, which was traceable to the middle of the humerus. The whole upper extremity was highly cedematous, the cedema in the axillary region hard and resistant. The arm hung down near the chest, the muscles of the humerus and forearm were paralyzed, only the extensor muscles of the fingers, especially of the thumb, had retained some mobility.

This case, therefore, was an instance of a very rare injury. The axillary artery was torn, (?) though no aneurismal tumor was present. Instances of laceration of arteries by the luxating power are not common. It takes place much more frequently in consequence of the force applied by the surgeon, particularly in cases of long standing. The artery is either torn completely, or, it happens, that only the two internal membranes are divided, while the external sheath of the artery remains intact in the form of a distended cylinder. The related case seems to range among the latter class. The absence of an aneurismal tumor is very remarkable. Malgaigne has collected 12 cases of the laceration of arteries by powerful attempts at reduction. Among these is a case of Nelaton, occurring to an aged lady with subglenoid luxation of the humerus. The reduction of the recently luxated arm had been easily effected. Soon after, however, a tumor formed in the axillary cavity, gradually increasing in size so as to present the appearance of an aneurism. The ligation of the subclavian artery did not arrest the growth of the tumor; a few days after the operation it burst and proved fatal. The post mortem showed, that the aneurism communicated with the dorsalis scapulæ, rendering thereby the ligation of the subclavian artery of no avail.

Another very uncommon complication in the case related, is the paralysis of the upper extremity. The paralysis, following luxation did not attract the attention of the profession till after the beginning of this century. Boyer first noticed the paralysis of the deltoid muscle. Paralysis of the whole extremity, however, has been accurately observed but recently. The paralysis as well as the lesion of the arteries, are either brought about by the luxating or reducing power, causing laceration, compression, contusion or excessive stretching of the nerve. Laceration of the nerve is of extremely rare occurrence. It has been observed only a few times in consequence of two powerful attempts at reduction in old cases. Compression of nerves, though mentioned by Van Sweiten and Desault, seems to have been presumed only on theoretical grounds. There is at least not a single instance on record, where it was proven beyond doubt. Contusion and stretching of the nerves is most frequently observed, immediately after the luxating power has ceased to act. The plexus of the nerves or a single branch is stretched beyond measure and contused by the dislocated head of the humerus, and the paralysis is proportionate in degree to the lesion of the nerve. Sometimes the paralysis may have been caused by a power, acting but momentarily upon the nerves in a similar

manner, as paralysis of the arm without luxation falls under observation, subsequent to a fall on or blow at the shoulder.

The question, whether in a case like that reported, anything is to be done, in order to improve the usefulness of the limb, is, indeed, difficult to answer. In regard to the reduction, it is not to be tried for several reasons. The hard oedema of the upper arm indicates that the exudation at this place has organized to such an extent that the reposition of the head of the humerus would be possible only at the expense of an extensive tearing of the soft parts. The other complications present, moreover, the rupture of the artery and the lesion of the nerve, might give rise to more serious accidents, if a very powerful force, as required in all probability, should be brought into action; gangrene of the extremity might even be a consequence. It is likely, that also in this case a spurious articulation will gradually be formed, which will allow a freer use of the limb. The muscles of the arm are completely paralyzed with our patient. Some favorable effect might therefore be expected from the use of Electro-magnetism, if it should become evident, that the paralyzed muscles contract under this stimulus. Without the use of this agent the muscles will probably undergo fatty degeneration. The patient, we are sorry to say, left the hospital after 2 days.

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*A case of Vesico-Vaginal Fistula, treated with the Button Suture of Dr. Bozeman.* By T. WOOD, M. D.

Mrs. C. B. —, æt. 26, was brought to bed with her fourth child on the 27th of June last. She was attended by a woman who cannot give any definite account of the labor further than that "it was slow, and that the child's head was in the bones about twelve hours before it was born." The child was still-born. One week after her confinement I was called to see her and found her with a dry parched tongue, full quick pulse, hot dry skin, and bowels constipated, with a constant dribbling of urine from the vulva, and extensive excoriation of the pudendum and nates from the irritating discharge.

On examination *per vaginam* the uterus was found intact, with the os tolerably well closed, but the lips were swollen and of a dull florid hue. The entire mucous membrane lining the vagina appeared inflamed, and was very sensitive to the touch of the speculum or finger. A small spot about the size of a dime, at the left side of the median line and about mid-way between the caruncula myrtiliformis and the os tincæ, was white and ragged, and at this point the urine could be seen issuing from the bladder into the vagina. Through this point the forefinger passed readily into the bladder, and the white appearance proved to be cellular tissue that had lost its vitality, but was still attached to the living parts.

On inquiry, I learned that the patient had been unable to pass

any urine for about five days after her confinement, and had suffered much from that cause, but it had suddenly burst away, giving immediate relief from the pain of retention, but ever after she was unable to restrain the flow.

The history and examination clearly revealed the nature of the difficulty, and she was at once advised that the only hope of relief was in an operation.

A cathartic was ordered, and a dilute solution of the acetate of lead directed to be thrown into the vagina several times a day. In a few days the sloughing process was completed, and the inflammation of the vagina had disappeared, except around the margins of the fistulous orifice.

From this time her general health improved and she suffered no inconvenience, except the painful scalding from the urine on the skin.

For the purpose of securing efficient attendance I had her admitted into the Commercial Hospital to undergo an operation, and just six weeks from her confinement, the button suture of Dr. Bozeman was applied to the fistula.

For a description of the button suture the readers of the *Lancet* are referred to the May number of the *Louisville Review* (page 76), where a valuable article appears, from the pen of Dr. Bozeman, of Montgomery, Alabama.

The various stages of my operation did not vary in any essential particular from the method of Dr. Sims, except in the application of the button suture. After the operation, absolute rest and a low diet were strictly enjoined, and the bowels, which had been freely opened by oil the day before the operation, were quieted by occasional doses of opium. The operation gave rise to no constitutional disturbance, and at each daily visit, until the seventh day, she uniformly replied to inquiries, that she felt perfectly well. On the seventh day, I found her with cold feet and hands, her countenance somewhat flushed, and some pain in the head.

Her bowels had not moved since the operation, and supposing the constipation to be the cause of the headache, I ordered her a dose of oil.

The next day the disturbance in the circulation had disappeared with the operation of the medicine. As no urine had passed through the fistula, after the operation, I felt pretty well assured that the union was complete, and, therefore, removed the sutures, when I found my hopes fully realized. Union throughout the seam, about three-fourths of an inch in length, was perfect and firm.

My main motive in giving this hasty report, is to offer my humble testimony in favor of the ingenious and simple contrivance of Dr. Bozeman. I believe that it possesses many advantages over all other methods that have been recommended, and, in my hands, it has fully justified all that has been said of its talented inventor.

[*Western Lancet.*

*On the Prevention of Pitting in Small Pox, by a Strong Solution of Nitrate of Silver.* By ALEXANDER ROWAND, M. D., Physician to the Marine and Emigrant Hospital, Quebec.

John Henry Smith, lumberman, aged 20; well proportioned and athletic, was admitted under my care, at the Marine and Emigrant Hospital, Quebec, on the 23d April, 1856. Three days after admission, an eruption of small pox made its appearance, which soon became confluent. Three days after the eruption presented itself, I applied a solution of nitrate of silver all over the face, of the strength of one drachm of the salt to an ounce of water, which was much stronger than I had heard of having ever been employed before. This was done with the view of preventing pitting, which appeared inevitable, from the severity of the disease and its tendency to confluence. For, in addition to high fever and constitutional excitement, the cutaneous inflammation ran a severe course, in some parts assuming an erysipelatous character, terminating in subcutaneous abscesses. The patient experienced a grateful sense of cooling from the application, which also relieved the distressing itching, and tension from which he suffered, and he begged earnestly to have the wash again applied. The practice was pursued daily till the 13th May, when it was discontinued. The blackened cuticle now began to peel off, leaving the face perfectly free from pitting, while the hands, in which the disease had been purposely allowed to follow its course, were deeply and numerously scarred.

Other striking and beneficial effects were observed to follow the use of this strong solution, besides the prevention of pitting—the inflammation about the face and head became diminished, and the itching and heat were lessened, whilst the application caused no pain, gave rise to no disagreeable odor, and was not followed by any secondary fever. The patient recovered completely from the disease, and is now a servant in the hospital.

In addition to the above advantages, I believe an important step is attained towards the patient's safety by so materially diminishing the intense inflammatory action about the head, and in such close proximity to the brain; and I am so strongly impressed with its utility in this respect, that I shall apply it not only to the face, but all over the scalp, in all future cases.

Having every reason to be gratified with the result of treatment in the foregoing case, I mentioned the circumstance to my friend Capt. Reeve, the commandant at Grosse Isle quarantine station, and strongly urged him to recommend a trial of the same plan in the quarantine hospital, when an opportunity should occur. He did so, and it was accordingly tested in four cases, during the following months of June and July, with the most satisfactory results.

These cases have been reported in the October number of the

Montreal Medical Chronicle, by Dr. Von Iffland, assistant physician at Grosse Isle, and I have received letters from that gentleman, and from Capt. Reeve, and Dr. George Douglas, the medical superintendent of the station, acknowledging that it was from me they obtained the first idea, as to the utility of a strong solution of nitrate of silver in the ectrotic treatment of small pox. I am well aware that weak solutions of the same salt have been recommended, but from their weakness, they proved irritating and inefficient, and have consequently been abandoned. The solid stick of caustic has been applied to each punctured vesicle, but this process was found to be painful and tedious, and in confluent cases almost impracticable.

None of these objections apply to the strong solution of one drachm to the ounce of water. Its application is free from pain, it has been proved to be highly efficacious, and its employment can be entrusted to a common nurse, or attendant on the patient. Moreover, I would recommend its application to the mouth and fauces. I do not, however, recommend its application to the cornea, when attacked with the small pox pustule, as that organ demands special and separate treatment from the surgeon.

I have ventured to publish the above case from a firm belief in the superior advantages of the remedy in preventing pitting, and likewise as an antiphlogistic agent of great potency, for I am fully convinced that its more general use will not only prevent much disfigurement, but tend materially to lessen the danger to the life of the patient, and I trust I shall also be pardoned for claiming to be considered the originator of the plan, a step which has, however, been rendered unnecessary by the frank admission of my friend, Dr. Von Iffland.

Of course, my readers are not to suppose that in the foregoing case, or in those reported by Dr. Von Iffland, that constitutional treatment was neglected.—[*Montreal Med. Chronicle.*]

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*Nitrate of Silver in Small Pox.* By A. VON IFFLAND, M.D., Vice-President College of Physicians and Surgeons, C. E.

In my article published in the October issue of the Medical Chronicle, on the ectrotic or abortive treatment of small pox, with a solution of the nitrate of silver, you cannot but have perceived, that I assumed no other merit, than that of successfully testing the application as suggested to me by Dr. George Douglas, (and to whom, as I therein observed, it had also been suggested). Indeed, I did not in the least, attempt to discover any new fact, but merely verified one, already expressed, and now, I am happy to announce, even tried by a distinguished member of the profession—Dr. Alexander Howard—and, I have therefore only to hope, that I have been chiefly instrumental in awakening general

attention to it, and thereby, extending the benefits of so important an ectrotic in that loathsome and disfiguring disease, the *small pox*.

The importance of obtaining a modifying power over the variolous pustule, had engrossed my attention for a number of years. I have brought to the test, independent of what may have originated from my own mind, almost every means, which had been considered by several gentlemen prominent in the profession, as efficacious in preventing the maturation of the pustule, and the subsequent pitting. The sulphur ointment, tincture of iodine, mercurial ointment, thickened with starch, and even the pure nitrate of silver, have all, from time to time, been employed by me, but with no very satisfactory result, at least, they more or less possessed such properties as to render them, if not dangerous, highly objectionable, and sometimes impracticable in *confluent small pox*.

It now remains with me to observe, that nothing but a sense of moral obligation to the human family, as well as the interests of science, has induced me to recommend most earnestly to the members of the profession, a solution of the nitrate of silver, in the form prescribed in my article as the safest, and most efficacious application, which in the present state of our knowledge, can be employed as an *abortive*, in the incipient, or more advanced stage of the eruption in *small pox*.

For this important and valuable application, second only in consideration, to that of vaccine inoculation, the claim of priority (in Quebec\*) appertains alone to *Doctor Alexander Rowand*, and I am happy, in common with his numerous professional friends, to recognise it. His zeal and activity in the cause of practical science is well known, and his labors in the field, cannot fail to bring forth useful fruits.—[*Ibid*.]

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*Case of Spina Bifida, with Post-natal Hydrocephalus, in which the operation of Paracentesis Capitis was performed seventeen times.*  
By J. B. GIBSON, M. D., of Claremont, C. E.

On the 17th December, 1855, attended Mrs. N—— in her confinement. She was delivered of a male child, which, upon examination, was found to have a tumour that was situated low down in the lumbar region, of the size of a couple of goose eggs. It was soft, impressible, and fluctuating, presenting all the ordinary character of the swelling, familiarly known as *hydro-rachitis*, or *spina-bifida*; a third of its surface, however, was peculiar, from presenting a raw appearance, and discharging a thin, watery fluid. Co-existent with this local condition, the lower limbs were partially paralyzed. These circumstances caused me to give a

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\* The parenthesis is ours.—ED. MED. CHRON.

very unfavorable opinion as to the probability of the child's surviving for any great length of time. The tumour was dressed with ung. simplex, and I left it, expecting that I should soon hear of the death of the infant.

On the 28th December, I was sent for to see the child, as the parents were anxious to have something done for the tumour; and hoping that it might in some way or other be made to heal, I prescribed a mild astringent lotion, without, however, any further expectation than that it would lessen the secretion constantly pouring out from the exterior. The result supported this view, for under the use of the application the abraded surface cicatrized. Almost simultaneously with the stoppage of the discharge, the head began to enlarge, although I was unaware of such being the case until re-sent for on the 28th January, 1856, I then discovered that the infant was laboring under well marked symptoms of hydrocephalus. The medical treatment (mercurials, diuretics, &c.,) usually adopted in such cases was tried, but without deriving any benefit from it, as the head kept on enlarging until the 24th April, when it had attained the size of twenty-six and a half inches in circumference, and seventeen inches from ear to ear over the vertex; it was furthermore remarkably tense, so much so that, to the anxious eyes of the parents, it seemed on the point of bursting. No amelioration occurring after a continued perseverance of the above remedial measures, but the case becoming rather worse, at the earnest solicitation of the parents that something more might be done for the relief of the child from its evident distress, I advised puncturing the brain; another physician was sent for in consultation, and on the 14th April, I performed the operation in the usual manner. Half a pint of a transparent colorless fluid was drawn off, and the head was then carefully bandaged, the child apparently experienced much relief from the operation, and none of the evil results occasionally witnessed were entailed. The paracentesis was repeated on April 19th, 26th; May 5th, 19th, 23d, 29th; June 9th, 16th, 22d; July 8th, 15th, 23d; August 1st, 11th, 18th, 25th, making in all seventeen times; the amount of fluid drawn off at each operation gradually increased until it measured a pint. But besides these copious evacuations a yet larger quantity of serous liquid absolutely escaped, since, after each operation an unknown leakage drained away for one or two days until the puncture healed, and it probably exceeded the amount measured at the time of the operation. After the tapping of the 26th August, symptoms of encephalitis manifested themselves, and the child died on September 1st. No post mortem examination was performed, as I did not think it necessary to urge the propriety of it, in opposition to the feelings of the parents. Nor was there any reason to expect the presence of any deviation from the pathological peculiarities of similar cases. The cranial bones were distinctly disarticulated from each other, and



floating, as it were, on the fluid beneath. I was inclined to believe that the encephalitic symptoms were rather of the cerebral than the meningeal type, and arguing from this, it is to be assumed that the hydrocephalus was of the ventricular type, or that species in which the brain is distended into a bag of thin nervous pulp in contradistinction to the second variety, in which from the fluid being extra-peripheric in location, the brain is flattened down towards the basis cranii in a laminated like manner. If this opinion be correct, the case is further interesting by shewing how much injury the brain can sustain without a serious result, for from the effect of the sixteen operations, antecedent to the last, the recovery was perfect. The fluid was secreted with amazing rapidity after its abstraction, so that the original volume of the head was but very temporarily reduced; that withdrawn on the 11th, 18th and 26th August, was of a dark reddish color, at all other times it possessed the properties and appearance answering to the description of it above given. The preceding case is encouraging to future operators, by assuring them with what extraordinary frequency and comparative impunity paracentesis capitis may be undertaken. As a surgical procedure, simply, the puncture is neither destructive nor untoward, and under this consideration the case adds another link to the chain of evidence that has already been collected by inquirers in substantiation of the little apprehension that is to be entertained of the consequences of encephalic wounds when placed under favorable circumstances. So long as the system possesses strong recuperative powers, it is capable of effectually defending itself from the covert invasions of the inflammatory conditions, we are taught, must necessarily co-exist during the progress of reparation from such injuries. And how forcibly is this truth impressed upon the mind of the observer in witnessing recoveries without the entailment of a single bad symptom, after the losses of brain-substance from violence, such as in the catastrophe described by Dr. Harlow, (Ranking's Abstract, 1849,) of an iron bar passing harmlessly through the skull; or again, as is perhaps less often noticed in the perfect exemption from ulterior consequences of a dangerous kind, that patients enjoy who died afflicted with a hernia cerebri, since in them it is quite common to see portions of the protruding brain actually cut away by the surgeon, or the same parts slough from their outward exposure, and yet in neither case is positive harm incurred. Examples like these seem confirmatory of the proposition advanced, by shewing not so much depends on the condition of the parts, or its importance to life, as rather on the anterior or concomitant states of the vital powers. For if now the opposite states be contracted, states of life in which these energies are depressed or worn out by previous disease, as in fever, or oppressed by an accumulating train of sickly events, as in scrofula, we find that their inherent recuperation is incapable of exertion, or else in the struggle

to assert its dominancy, it is led by the inclinations of disease into a perverted action. It is under unpropitious circumstances like these that the slightest injury or wound turns out bad and ends wrong. Of this abundant proof could be adduced. Applying then these reflections to the case above reported, we would seem to have an explanation of the final establishment of encephalitis, for as long as the recuperative powers were sufficiently competent, the danger of the operation was averted, but as they grew enervated by the protraction of the original disease, then reparation was supplanted by a fatality—the simple restricted inflammation of the former passed uncontrolled into an action of a higher grade. Extending now these observations to the general question of the propriety of paracentesis capitis in cases of hydrocephalus, it would seem we had an easy guide offered us for our determination of the uncertainty in any individual case, by giving a due estimation to the condition of the constitution of the patient. This certainly appears to be a trustworthy indication, and I think the facts now advanced—demonstrate that the operation in itself is not dangerous, and is not precluded from employment as some surgeons once supposed by any such fear. Nor would it seem that one form of hydrocephalus more than another, is preferable in an operative point of view, in opposition to the opinion that has been elsewhere expressed, which contends that in the external variety there is less risk of subsequent evil than in the internal form, because the preceding serves to shew that in the latter the supposed source of danger has in reality no existence. And in conclusion, I would remark it is well for practitioners such an equal immunity should prevail, for, I believe, it will be generally granted, it is impossible during life either to diagnose the one kind of intra-cranial dropsy from the other, or to fix correctly upon the precise seat of encephalic inflammation, whether it be meningeal, cerebral, or both.—[*Ibid.*

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#### *Carbonic Acid an Anæsthetic.*

At a regular meeting of the Academy of Medicine of New York, March 5th, 1856, Dr. William Parker, President, a communication was read from Prof. Simpson, of Edinburgh, addressed to the Academy, "On Carbonic Acid Gas as a Local Anæsthetic in Uterine Diseases," etc.

It appears that Prof. Simpson was led to the use of carbonic acid gas as a local anæsthetic in painful conditions of the vagina, uterus, and neighboring parts, from reading the case of a lady, treated by Dr. Rossi, of Italy, and reported in the second edition of *Pereira's Materia Medica*, vol. 1, p. 155. In this case there was no organic disease and merely an increased irritability, which was completely relieved by the injection of carbonic acid gas.

Prof. Simpson has frequently resorted to this treatment within the last two or three years; and, though not always with success, yet frequently with great relief, and occasionally with immense benefit. Several cases were given in illustration. One lady who had been bed-ridden for years from pain, and bearing down when standing erect, was almost entirely cured by injections of this gas.

His method of applying it is, to use a bottle having a flexible tube attached to the cork. The materials used for generating the gas are tartaric acid, six drachms; bicarbonate of soda in solution, eight drachms; and water, six ounces. The injection may be used several times a day. Other materials may be used.

Prof. Simpson adds, that the employment of carbonic acid gas as a local anæsthetic to the uterine mucous surface and other parts of the body, is not a recent discovery. Dr. Dewees, of Philadelphia, speaks favorably of it in his work (*Dis. of Fem.*, p. 269). Prof. Morjon, of Geneva, has used it frequently, and with decided advantage.

Referring to ancient writers, the author is disposed to consider the practice of burning certain aromatic and medicinal herbs, and applying the fumes to the interior of the vagina by means of proper tubes, to be but another phase of this practice,—as carbonic acid is the result of such combustion.

He also ascribes the beneficial effects of mineral waters, in many cases at least, to the topical application by means of baths and injections of these waters, which generally hold in solution large quantities of carbonic acid. Female patients have assured him of the relief they experience from uterine pains, while using injections of the waters of springs, as practised at different German baths. The same is true in certain cutaneous diseases. The common effervescing draught, in gastric irritability and nausea, acts on the same principle. The injection of carbonic acid gas in dysentery, as practiced with success, by Hey, of Leeds, in 1772, Perkins, etc., is directly in point. The benefit of the common yeast poultice, which gives rise to carbonic acid gas, may be similarly explained. Many other examples were alluded to in the paper, showing how frequently this agent is used in practice without recognition of its anodyne properties.

Dr. Detmold remarked, that members would recollect that, about the year 1847, he called the attention of the Academy to certain propositions, which he then made, proving quite conclusively that carbonic acid gas is the efficient agent in causing anæsthesia. The carbonic acid may be given as such, or one of its chemical ingredients may be so administered, that, finding in the blood the other constituents of this compound, carbonic acid gas is generated, and anæsthesia, to a certain extent, is the result. Thus we may administer oxygen in large quantities, in the form of nitrous oxide (protoxide of nitrogen, or laughing gas,) which has all the chemical reactions of oxygen, but is much more soluble in water and

the serum of the blood than pure oxygen, and, therefore, is much more readily taken up. This compound meeting with the carbon of the blood, carbonic acid gas is formed in large quantities, with the production of anæsthesia to a certain extent. Or we may, on the contrary, administer the carbon, as the oxyde of carbon or any of the hydro-carbons, alcohol, the ethers, etc.; in this case the blood again furnishes the other constituent of carbonic acid, oxygen, and anæsthesia is again the result.

The stage of excitement corresponds to the period of combination of these elements and the formation of carbonic acid gas. If the gas is administered as such, there will be no stage of excitement; but if the constituents combine slowly, and the gas is generated in limited quantities, there will be a corresponding stage of excitement. Thus, in the stupor of drunkenness, carbonic acid is exhaled in normal quantities; but as the stupor passes off, large quantities of that gas are exhaled. The venous state of the arterial blood, during anæsthesia, is another proof that carbonic acid is being generated in large quantities. If it is true that in post mortem examinations of those dying while under the influence of chloroform, bubbles of air are found in the heart and blood vessels, it is highly probable that this air is carbonic acid gas, unless, perchance, it has entered the circulation by some mechanical lesion.

The only means, in his opinion, of any avail in restoring a patient from profound or fatal anæsthesia, is artificial respiration, or such other means as, by exciting reflex action, will restore respiration, and thus hasten the elimination of the carbonic acid gas. It has been recommended in threatened and apparent death from anæsthesia, to resort to the inhalation of oxygen or nitrous oxyde. Reasoning from the premises which he had given, such remedies would be in the highest degree dangerous. To satisfy himself in regard to this fact, he had made numerous experiments upon animals, and invariably found a fatal issue hastened by administering oxygen.—[*N. Y. Journal of Medicine*.

At a subsequent meeting, Dr. Detmold favored the Academy with a written exposition of his views of the rationale of the action of chloroform, sulph. ether, and nitrous oxyde, the three agents employed for the purpose of producing anæsthesia. He attributes the action of all of them to the production of carbonic acid gas in the system. The first two supply the carbon, which absorbing oxygen from the blood, and the last supplying oxygen, which absorbing carbon, in either case carbonic acid is the result, which by its action on the living organism produces anæsthesia. This theory, though not absolutely susceptible of demonstration, is yet apparently based on a logical foundation, and finds a seeming confirmation in a number of well-known facts: indeed it was elicited by the allusion made to the anæsthetic properties of carbonic acid, by Prof. Simpson in his recent paper, of which I gave an account in my previous letter.—[*Charleston Journal*.

*On Secondary Syphilis Treated by a New Preparation of Iodine, &c.*  
By J. C. CHRISTOPHERS, Esq., F.R.C.S. York-place, Aug. 1856.

The good results ordinarily obtained from treating cases of secondary syphilis by the various officinal preparations of iodine are universally known, yet there are cases which resist their influence, and there are constitutions which rebel under their administration. The object of this paper is to introduce to your notice a new preparation, perhaps a new compound, which, combining the good effects to be derived from iodine, is devoid of its disadvantages—a preparation which, in my hands, has proved valuable in curing cases of secondary syphilis which had previously resisted the beneficial actions of iodine in all its usual combinations and forms—a preparation, moreover, which does not produce the evil effects of iodine in those constitutions with which that substance is known to disagree.

My experience of the action of this remedy is limited to cases of secondary syphilis; but in the hands of some other surgeons, I am told, it has been found efficacious in cases of scrofula, anæmia, and in the furunculoid plague which has infested this city during the last three or four years.

To Mr. Hockin, the chemist, in Duke-street, (who manufactures it under a patent granted to M. Dupont,) I am indebted for my knowledge of this preparation, and for its formula. There are, indeed, two preparations: the one (that which I have found so useful in treating cases of secondary syphilis) the names "*liquor cinchonæ hydriodatis*;" the other, (that which has been found useful in treating boils, anæmia, and scrofula,) "*liquor cinchonæ hydriodatus cum ferro*." The former contains in one fluid drachm of liquor, twelve grains of cinchonæ flav., and one grain and a half of iodine, in the form of hydriodic acid. The latter contains in addition to the former ingredients, one grain of protoxide of iron in each fluid drachm of the liquor. These preparations are produced by exhausting the powdered bark with an aqueous solution of hydriodic acid; then with water, and the liquor is subsequently evaporated to the above bulk.

The circumstance that the iron compound ever remains in a state of proto-salt, and that the liquor never, either by time or by exposure, becomes inky, through the action of the tannic principles in the bark, goes to show that there is here something more than a mere mixing of ingredients, and that some new combination of iodine, the cinchona alkaloids, and the peculiar tannic principle, exists in it, which the fact corroborates, the same materials act differently when used singly, together, or when otherwise combined.

The dose in which I have prescribed these preparations varies from one drachm to three drachms of "*the liquor cinchonæ hydriodatus*," and from fifteen minims to two drachms of "*the liquor*

cinchonæ hydriodatus cum ferro; and in these doses I have not found any of the evil effects arise which smaller doses of the other preparations of iodine have been known to produce.

I must not omit to say, (inasmuch as I attach much importance to its use,) that in some of the successful cases treated by means of the preparation described, I have also employed the hot-air apparatus, in order to produce profuse sweating, and always with marked good effect. Indeed, I do not know a more potent remedy for intractable and inveterate cases of secondary syphilis than this is.

The ancients recognised the great advantages of sweating their patients when treating them for this disease and most of the authors of an early period, prescribe it as a remedy, and some of them give elaborate directions for producing and for prolonging its effects. They describe the sweating by medicines, sweating in bed, sweating in a hot-house (whenever it can be procured), and sweating by labour, and either of those processes they designated the "sweating course."

It has occurred to me to find that it is far more difficult to cure secondary syphilis in the higher than in the labouring classes, and I have thought that the daily occupation of the latter, whereby the skin is forced into constant action, may in some measure account for it.

Opium was at one time considered to be a specific for syphilis. I have found it useful, and most so in those cases in which it produced free perspiration—its very usual effect.

The use of the hot-air bath is impeded by the thought that it entails a difficult and complicated apparatus, and that it cannot be used by the patient when at home. It is not so. Few things are more simple, easier of access, or less costly than it, and the patient can be submitted to its action in his own bed. There are many forms: one of the most simple was employed by Dr. Wilson, in the Middlesex Hospital, with good effect; another by Mr. Kurtz, a chemist at Liverpool. The former was employed for sweating only; the latter for sweating, and for the administration of iodine and sulphur.—[*London Lancet*.

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*Treatment of Inverted Toe Nail.* By J. BROKE GALLWAY, Surgeon Royal Artillery. (Communicated by Dr. ANDREW SMITH.) Corfu, July, 1856.

A good deal has been enunciated from time to time of late years upon the most legitimate line of practice necessitated by the frequency of an affection of no very dignified pretension in the catalogue of surgical woes, but for all that possessing strong claims to our notice from the suffering occasioned by its presence, and still more from that attendant upon the means in common use for its relief—ingrowing of the nail of the great toe.

In systematic works on Surgery, the acknowledged line of practice for this condition is the barbarous rule of forcing a sharp instrument from the free edge up to the root of the nail, and tearing the latter away by a process of evulsion—an operation which is certainly deprived of much of its suffering by chloroform, though still the opprobrium of surgery to the eye and the imagination. The periodical press has teemed with modifications of and improvements upon this practice.

I have found the following little expedient attended with but trifling pain, while it offers a most efficient remedy for the evil:—With a fine and well-tempered file, let a vertical incision be carried down to the matrix, from the root to the free margin of the nail, a few lines from the lateral border, according to the degree and extent of the inversion. This part of the step can be performed by the patient himself, and at his own leisure, which in private life has the advantage of robbing the operation of much of its terrors. It is easily effected, and, I need not say, painless. When thus prepared the surgeon should gently seize the divided edge of the smaller section with a pair of broad-bladed dissecting forceps, and with an infinitesimal amount of tractile and of slightly jerking force tear the offending portion of the nail from its bed and lateral connexions. It is really a very neat operation, and most satisfactory in its results. It should be repeated at the opposite border of the nail, supposing both lateral margins to be inverted.

By this little expedient I have lately resuscitated a poor fellow who had become quite lame in both feet from this condition.—[*ib.*

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*Treatment of Neuralgia, by the Valerianate of Ammonia.* By Dr. DECLAT.

We have prepared an abstract of an interesting translation from the *Revue Med. and Etrangere*, which may be found in a late number of the *Medical Examiner*, as it brings to our notice a new remedy, which may be of value in the treatment of a class of diseases increasing in frequency and often-times obstinate in their persistency. According to Dr. Declat, such cases will yield to the influence of the valerianate of ammonia; and as proof of his statement, he gives the two following cases:

CASE I.—The Marchioness of Fontanelle suffered with facial neuralgia for six years, first appearing as she was cutting a wisdom tooth. Legrand and Jobert (de Lamballe) ordered its extraction, which was done, causing agonizing pain. The neuralgia still continued in spite of every effort of such advisers as Sedillot, Velpeau and Jobert. Quinine, opium, belladonna, strychnia, iron, gold and quinquina were employed, and external applications, as blisters, opium plasters, dulcamara, chloroform, collodion, aconite,

&c. Every thing failed. Jobert applied the actual cautery along the course of the inferior maxillary nerve, and after trying the waters of Plombiere with partial though temporary relief, the Marchioness applies to Dr. Declat.

The first remedy used was Fowler's solution, which was pushed until it produced constitutional symptoms, without success. The patient had become almost insane from the agony, when an experiment was made with valerianate of ammonia on the 3rd of January. A teaspoonful that night relieved partially, and two teaspoonfuls the next day entirely banished pain. The medicine was discontinued May 6th. Occasionally, however, Mad. Ferrand has "slight twinges," but resorts to the specific, and always successfully. This lady seems to have hereditary right to neuralgia, her mother having been a great victim to the disease, whilst her brother, the Earl of Essex, has had *tic douloureux* from his youth.

CASE II.—M. Letellier, who had suffered horribly with pain in the head, extending to the neck, and losing itself on the branches of the facial nerve, was at Plombiere's when taken, and returned to Paris in great agony. Dr. Lewis tried blisters, sage, quinine and morphia, without any effect. He used morphia to such excess as to remain in stupor almost constantly. Dr. Declat administered the valerianate of ammonia in drachm doses twice a day. in five days he was up, and in nine days all pain had passed away. He has since stated that his cure was complete.—[*Montreal Med. Chronicle*.

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### *Phenomena in the Life of Pigment Cells.*

Busch (Müller's Archiv.) has made a series of highly interesting observations upon the various changes which take place in the pigment-cells of the skin. His attention seems to have been first drawn to this subject by portions of coloured skin separated from the larva of the frog and the triton, and by the web of the frogs foot. He found that often the cells put out projections from their walls, which went to form pigment globules or balls, and as these projections lengthened, these globules became, as it were, pedunculated. The stalk then gradually thinned, and finally altogether retracted, leaving the pigment-globules isolated. The process was repeated in the same cell, and was a second time watched. Sometimes a species of sac was pushed out, which became divided into two, and after increasing greatly, became disjoined from the main pigment-cell, and another one was then pushed out in its place. Changes of form in the pigment-cell and in the peduncles were also observed, and are figured by the author. Busch also found the pigment-cells to be very contractile, and responsive to the stimulus of electricity.—[*Brit. and For. Med. Chir. Rev.*



*Contributions to the Physiology and Pathology of the Heart.* By H. BAMBERGER, Prof. of Med. Clinic in Würzburg. (Translated for the Medical Examiner.)

*On the Motion of the Heart.*—During the past summer, the rare opportunity was afforded me of closely observing through a wound in the parietes of the chest, the conditions of the heart's pulsation; a phenomenon frequently discussed, but as yet very obscure. The case occurred in a healthy man, 30 years of age, who attempted to take his life by stabbing himself in the breast with a sharp knife. The deed took place in a public garden, and I saw the patient about half an hour afterwards, when he was brought into the hospital. According to the testimony of those who brought him there, the bleeding had been profuse, and must at first have spirted in streams from the wound. He was pale and exhausted, but conscious. It was a smooth-edged, gaping wound, about an inch broad, inclining downwards, somewhat in front of the nipple, and at the lower side of the fifth left rib; upon each contraction of the heart, a considerable quantity of dark blood was discharged. It was evident that the patient, who belonged to the higher class, had intentionally selected that spot where the pulsations of the heart were best perceived. I pressed my index finger into the wound, and was greatly surprised to meet the flat, slippery point of the heart, which had, however, received no perceptible injury. There was scarcely a doubt that the pericardium was opened, as it would have been scarcely possible otherwise to have felt the point of the heart with the accuracy above described. Of course, I availed myself of this favorable opportunity to study, as far as was possible, the motion of the apex of the heart. When my finger was introduced from the point towards the back, I could convince myself with the greatest certainty that at every systole the hardened and pointed apex of the heart slipped down along the front wall of the breast downwards, somewhat to the left, and a little below the lower margin of the wound; a copious discharge of blood taking place at the same time near my finger, whilst in the diastolic moment, the apex retreated upwards and could not be felt. The duration of the 1st period, when the point of the heart moved along my finger, appeared to be somewhat shorter than the 2nd period, yet I could make no positive assertion regarding this, as the contractions of the heart were so frequent, about 100 in a minute. Notwithstanding the strictest attention, I could not perceive the lever-like motion of the point of the heart, nor the rotation of the same about its longer axis. As regards the patient, it is merely necessary to state, that the suture was immediately applied. After a few days, pericarditis developed itself, with a loud, grating, friction sound, that lasted about ten days, accompanied by a moderate effusion into the left pleural sac. In spite of this condition, and of a slight hæmoptysis that occur-

red, the general symptoms were light; the patient rapidly recovered; the wound healed by the first intention, and after a few weeks he was discharged. Neither in the pericardium nor in the pleural sac, as daily investigations showed, did any admission of air take place.

It may be permitted me to offer a few remarks upon these observations. The most important object gained by it is, I consider the establishment of the fact that during the systole of the heart, a true movement of its apex takes place in the direction from above downwards and towards the left. The question might arise as to whether this movement may not be considered only as an apparent one, induced by a systolic elongation of the heart; but since Harvey has shown more clearly the relations of the heart to the circulation, the previously accepted view of the heart's lengthening by the systole is entirely exploded, and at present the results of numerous vivisections and observations of Ectopia of the heart places beyond doubt the fact that the heart during the systole is lessened in its long diameter. The fact, therefore, that the apex of the heart can be felt considerably lower during its systole than during its diastole only by an actual depression of the whole heart can only be explained in the manner as described long since by Skoda. Skoda has published similar observations on a new born child, with deficiency of the sternum, where the fissure was only covered by skin. I had been a long time convinced of the correctness of Skoda's view, that in decided hypertrophy of the heart, the deeper position of the apex of the heart during the systole might be proved by percussion, and those observations further made it highly probable to me that similar relations existed for the normal condition; this probability has since become positive certainty. This circumstance explains also the fortunate results of the above mentioned case. If the communicated facts are considered, we are necessarily led to the view that the stab must have been made at the time of the diastole, for only on such a supposition is it conceivable that the apex of the heart, which was felt beating so distinctly in the wound, could remain uninjured. Besides it is not inconceivable that the violent physical concussion at the moment of stabbing may have prevented the occurrence of the systole.

How is it now with reference to the oft-mentioned lever-like motion of the heart, in consequence of which the heart beats against the parietes of the chest? Harvey, Cruveilhier, and Follin have observed this in Ectopia of the heart, and the numerous investigations of Volkmann seem further to place this fact beyond doubt. It may be imagined, that I am not inclined to oppose such authority, or to place too much value upon one negative observation, whilst at the same time I do not wish to undervalue its importance, as it appears to me to be the only one whose outward relations differ as slightly as possible from its normal condition.

For it appears to me, that it can be readily conceded that the possibility of a lever motion of the heart may take place where the wall of the chest is absent or broken through, without its being necessary to maintain its actual occurrence in an uninjured thorax; it may be exactly as it is in the motions of the exposed brain, the possibility of which we can with justice deny in an uninjured skull; in one case as in the other a normal obstacle is absent, and forces are put in action which could not be so at an earlier period, although in each case they must have been present. So long as we are ignorant of the *quantum* and *quale* of the determining forces of the heart's motions, it will remain a useless task to determine *a priori* the direction of these motions; if we concede, however, the motion of the heart to be downwards, and consequently the existence of a force that drives it there, as is proved by the foregoing, then may we also grant the existence of another force which has the tendency to move the heart lever-like forward. This, however, is so restricted by the chest-parietes, that the resulting motion is in the direction downwards, the heart moving downwards is pressed more strongly against the breast wall, which condition possibly assists the object of the heart's contraction. The lever motion can never of itself be the measure and the true reason of the heart's pulsation. For the greatness of these pulsations does not depend upon the material of the lever, upon its thickness, &c., but upon the length of its arm and the moving force. The heart's pulsation ought therefore, all other things being equal, be stronger in a giant than in a dwarf; in an adult than in a child; which all experience contradicts. On the contrary, it cannot be denied that the thickness of the heart's walls has a positive influence upon the force of the heart's pulsations, as daily experience in hypertrophy of the heart proves.

The complete parallelism that exists between the anterior surface of the heart and the interior wall of the chest, the perfectly flat surfaces of both, and the intimate contiguity of the same in the closed thorax, do not accord as Kiwisch has already shown, with the idea that the apex of the heart beats against the breast wall, and is forced into the intercostal spaces. In narrating later experiments upon animals which I have had the opportunity of making, I shall return again to the question of the lever motion. Though I cannot entirely agree with Kiwisch's view, and must hold to the motion of the heart in every case being downward and toward the left, yet I fully coincide with him when he makes the perceptible impulse of the heart depend not upon a peculiar beat of its apex against the breast, but merely upon the evident systolic hardening of the muscles of the heart pressed into the intercostal space. But it may be asked if this is the case, why is the pulsation of the heart felt only at a small spot corresponding to its apex, and not over the whole surface where the heart lies upon the breast-wall? Several things appear to me to contribute

to this. First, that part of the heart, that is directly upon the breast-wall, belongs entirely to the right ventricle, which on account of its comparative thinness, is far less fitted to make its systolic hardening outwardly apparent, whilst that point of the left ventricle that lies close upon the breast wall, from its greater muscular character is consequently better fitted to make its action apparent. Besides, we must not forget that the juxta-position of the upper ribs which are closer even than the sternum, and more particularly the thick muscles of the breast, render it almost impossible to perceive the heart's contractions under ordinary circumstances. I have myself often observed, in children and in emaciated persons, that the heart's impulses frequently occupy much greater space, and indeed can often be clearly felt wherever the heart touches. In hypertrophy of the heart, that is, as is well known, a daily phenomenon. I have seen very frequently the right ventricle of the heart giving as decided an impulse as the apex, and yet there exists no reason for supposing that the motions of hypertrophical hearts, leaving the strength out of the question, differ in any way from those of the normal ones. If the breast muscles of a rabbit be removed, and the intercostal space exposed, the pulsation will be distinctly felt on every part that the heart touches, though this could not have been previously perceived. There is, therefore, no necessity to postulate any other than the usual motions of the heart's pulsations.

Skoda (5te. Aufl. p. 162,) opposes his view of the action of the contracting power of the lungs upon the chest parietes, to the views of Kiwisch. The conclusion of his argument purports as follows: "Since the heart is held in contact with the chest-parietes, and the diaphragm by the expanded lungs, and the contracting power of the lungs causes a continual contraction of the soft parts of the chest-wall, then the heart, whatever form it may take, can never by a change of form cause an arching of the intercostal space or diaphragm from above or below; it must rather, if there be no other influence upon its condition, produce a slight drawing inward of the intercostal space and of its diaphragm."

In spite of my great reverence for Skoda, I must here be permitted to differ from him. If we were treating merely of the diminished space of the heart during the systole, a contraction of the intercostal space rather than arching of the same would occur; but when on that account the heart passes into a more ball-like form, its muscular fibres hardening, and consequently producing a pressure against the chest-wall, which does not take place during the systole, then the question is, whether this pressure from without is sufficiently great, not only to prevent the contraction of the lungs, which acting through the heart produces a contraction of the intercostal space, but actually produces a positive rest. Already *a priori* this possibility must be admitted, since no other

sufficient reason exists, and *a posteriori* shows even that the existence of a systolic arching is in fact the case.

On the rotary motion of the heart, mentioned by many experimenters, the consideration of this case offers no conclusions. Whilst it is at first sight probable that such a one can only be sufficiently clear on the bases of the heart, and not merely at its apex, and it were unjustifiable to deny the motion solely on the ground of one negative observation; on the other hand, the peculiar undulating arrangement of solid exudations in pericarditis confirms the same to a very great degree.

I have intentionally mentioned the results of my observations, and such as immediately grow out of them, without bringing into the question any experiments on animals, because I am of the opinion that any deduction from the phenomena of the heart's motions in animals can only be applied with great care to man. But I believe not the less, that they must yield exceedingly important data, if they are brought into harmony with the observations on healthy and diseased men. I have the liveliest desire to observe the phenomena of the heart's motion in animals, in a much more extensive manner than has yet been offered to me in man; but I also believe that an actual advantage can only be drawn from such observations, by preserving intact the relative position of the heart and lungs, because, from the beginning, I was convinced that any important disturbances in the normal relations must produce such considerable changes in the heart's motion that any application of the same could not be thought of. Further observations have in the highest degree confirmed this view, and convinced me that in the open pleura, or in the removal or tearing out of the heart, its motions suffer the most important changes, and indeed not rarely are completely opposed to its normal condition. Too true it is, that the various investigations of extracted hearts have rather hindered than assisted the student on the motions of the same.—[*Archiv. für Pathologische, and Medical Examiner.*]

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*On the Various Forms of Obstruction of the Bowels.* By W. H. RANKING, M. D.

The various forms of intestinal obstruction may be conveniently arranged under the following heads:

- I. Simple enteritis.
- II. Impaction: by fæces, or other solid formations.
- III. Narrowing of the canal from disease within the bowel.
- IV. Pressure of tumors external to the bowel.
- V. Displacement of a portion of the bowel, causing it to twist itself upon another portion.

VI. Incarceration of a portion of the bowel in a loop, formed by false membrane, or adhesions, or in some abnormal opening.

VII. Invagination or intussusception.

1. Simple enteritis, or inflammation of the bowels, is usually, but not always, attended by constipation, which purgatives, if given in ignorance of the true nature of the case, fail to overcome. In this case the obstruction is due to the inability of the inflamed bowel to propel its contents; it allows itself to become distended. The transition from inflamed to healthy bowel is in some of these instances very marked, the upper portion being distended, congested and even gangrenous, while the lower portion is abruptly pale, empty and contracted.

2. The usual cause of obstruction from impaction is by the presence of hardened feces, but in some instances concretions of other kinds take place, and complete obstruction has been known to be caused by a large gall-stone. Dr. Watson relates such a case in his lectures.

3. Narrowing of the bowel from internal disease is the result either of chronic inflammation, with ulceration and interstitial deposit, or of cancerous degeneration of the coats of the bowel. Giles' is an instance of the former disease. The stricture thus induced, may occur in any part of the intestinal tract, but is most commonly found in the rectum, and within reach. This is specially the case with reference to cancer, for of 878 fatal cases from this cause, in 221 the disease was located in the lower bowel.

4. Obstruction from tumors pressing on the bowel from without is comparatively rare, but cases are recorded in which such a result has been induced by large malignant tumors, and by a retroverted uterus.

5. Strangulation from simple twisting of the bowel upon itself is also rare, but several cases are on record. I have myself met with two marked instances, one of which I related some years ago to the Pathological Society; the other has recently occurred. In both the descending colon had turned over upon itself, producing fatal obstruction. Two cases are also related by Mr. Mackenzie in the *Medical Gazette*, in which the colon was similarly dislocated. Now and then, also, an analogous displacement takes place in the small intestine, in consequence of a preternaturally deep mesentery.

6. The sixth variety of internal strangulation of the bowel is more common. It has occurred to me to see several cases, and an instance you lately witnessed in this hospital was one. The more common appearances found are a band of false membrane, the result of some former attack of partial peritonitis; an adhesion of the free extremity of the appendix vermiformis, giving rise to a noose through which the bowel slips; or a rent or congenital fissure in the mesentery or diaphragm.

7. The last form to be mentioned is intussusception. In this case

one portion of the bowel slips into the portion below it, as may be imitated in the finger of a glove. The portion thus inverted is sometimes of considerable length, and when it gives rise to a tumor perceptible through the abdominal parietes, it is called a *volvulus*.

There is a great difference in the relative frequency of these several causes of intestinal obstruction, as may be seen in an analysis made by Mr. Philips in an admirable paper published in the 81st volume of the *Medico-Chirurgical Transactions*. He has here collected 169 cases, and of these 69 were instances of invagination or intussusception; 60 of strangulation by the constriction of bands, adhesions and abnormal openings; while 19 only were caused by disease of the coats of the bowel, 11 by impaction of hardened feces or concretions, and 16 from the pressure of tumors external to the bowel.

Whatever be the cause which offers impediment to defecation, a certain train of symptoms sooner or later ensues, though it must be added they do not follow any regular gradation or combination peculiar to individual lesions; hence the difficulty I have spoken of in deciding upon the exact seat and nature of intestinal obstruction. The first thing that usually attracts attention, is pain; this is or is not accompanied by vomiting, and it is found on inquiry that from a certain date there has been no action of the bowels. Day after day passes without relief being obtained, and the symptoms become more severe, the pain more constant, the vomiting more urgent and eventually stercoraceous; the abdomen also becomes more and more distended, the pulse quickens, the countenance becomes haggard, and in fatal cases sooner or later symptoms of collapse ensue, and the patient sinks retaining his mental faculties to the last. This is a description of an average case of *ileus*; but great variation is manifested in particular cases in the relative urgency of the several symptoms and in their grouping. I will briefly consider these symptoms *seriatim*, and first, of the pain.

This symptom is usually present in greater or less intensity, but in some few it is very unimportant, and cases may prove fatal in which there is neither spontaneous pain, nor great tenderness on pressure of the abdomen. In other cases it is the first symptom which excites alarm, and occurs often during some exertion or after an indigestible meal. In such instances it is not uncommonly found that a portion of bowel has become strangulated, and the sudden pain would seem to indicate the precise moment in which the bowel has become imprisoned. In other cases there is little or no pain for some days, but it soon declares itself in connection with distension of the abdomen, and marks the occurrence and progress of the enteritis, which seldom fails to add to the fatal tendency of the mechanical obstruction. Towards the close of life, when gangrene ensues, the pain, as in idiopathic peritoneal inflammation, often quickly and entirely subsides.

The *constipation* is, in all cases of genuine obstruction of the bowels, complete; or, if any faecal matter passes, it is merely that contained in the bowel below the constricted point. In some cases of intussusceptio, bloody mucus passes, which, in children especially, will materially assist in forming a differential diagnosis.

The *vomiting* is a symptom, subject to much variety. I have recently had a case under my care in which the obstruction was of fourteen days' duration, with immense distension, but vomiting did not once occur. This case proved fatal without the patient once vomiting. The obstruction was in the sigmoid flexure. For the most part, however, vomiting is a very distressing symptom and adds materially to the difficulties of medicinal treatment. At first it is simply the ejection of the ordinary contents of the stomach, but at some variable intervals it becomes faecal.

The *abdominal distension* likewise varies both in degree and period of occurrence. In some cases, where the obstruction is high up, as in the duodenum, there is little or no distension; on the contrary, the abdomen becomes flat or even retracted. Generally a tympanitic condition soon declares itself, and may proceed to an enormous extent, so that distended coils of intestine become perceptible to the naked eye.

The condition of the urine is thought by many, and especially by Dr. Barlow, to give important evidence as to the site of the impediment. Where it is copious, it is supposed to indicate obstruction of the lower end of the tube, and the reverse when it is scanty in quantity. Further inquiries are, however, requisite to establish this as a trustworthy symptom. The state of the circulation in intestinal obstruction fluctuates. The pulse may be unaffected at first, but rarely fails to sympathize with the gravity of the disease, in a rise of frequency and subsequent loss of power.

[*Medical Times and Gazette.*

*Glycerine and Tannin in Vaginitis.* By M. DEMARQUAY.—In the treatment of this affection, M. Demarquay has found a composition, consisting of eighty parts of glycerine and twenty of tannin, of great service. When the vaginitis first appears, the inflammatory symptoms should be calmed by appropriæ regimen, baths, and frequent emollient injections. When the first stage of the inflammation has passed away, and the careful introduction of the speculum has become possible, abundant injections of water are to be thrown in, so as to remove all the mucus which lines the walls of the vagina, and these are then dried by a plug of charpie placed at the end of a long forceps. Then, three plugs of wadding, well soaked in glycerine and tannin, are to be introduced. Next day, after a bath, the plugs are removed, new injections made, and the dressing repeated. M. Demarquay has never had to have recourse to more than four or five such dressings. After discontinuing them, astringent injections, consisting of infusion of walnut leaves, in which one drachm of alum to the quart has been dissolved, are employed two or three times a day for a week or ten days.—[*Bulletin de Thérapeutique*, and *N. O. Med. News and Hosp. Gaz.*



## EDITORIAL AND MISCELLANEOUS.

WE beg leave respectfully to announce that in consequence of other engagements, our Editorial supervision of the Southern Medical and Surgical Journal terminated with the volume just completed. It is a source of much gratification to us that the publication of the work will be continued by gentlemen eminently qualified to sustain its literary and scientific reputation, and to add to its extensive patronage. In retiring from the Editorial Chair, we cannot refrain from the expression of our grateful acknowledgements for the indulgent liberality of our patrons and the courtesy extended to us by the conductors of other periodicals.

L. A. DUGAS.

Augusta, 10th Dec., 1856.

H. ROSSIGNOL.

INTRODUCTORY.—We feel that “the lines have truly fallen to us in pleasant places.” We enter upon our Editorial duties in charge of a journal in the full tide of prosperity, and in the vigor of an unbroken and healthful prime. The present number initiates the *Thirteenth Volume* of the New Series of the Southern Medical and Surgical Journal, and while we are disposed to congratulate ourselves on the well-established and prosperous condition in which we find it, we can but feel, that the amount of responsibility imposed upon us is thereby greatly enhanced.

Feeling the incompleteness of Southern Medicine without some accessible and convenient medium for the interchange of thought among Southern Physicians, the late Professor MILTON ANTONY having associated with him Dr. JOSEPH A. EVE, the present able Professor of Obstetrics, began this publication, under its present title, in the year 1836. Notwithstanding the difficulties attending such an enterprise at that early period, it was issued regularly until it had nearly completed its Third Volume, when it was suspended by his lamented death in the year 1839.

In 1845, its publication was resumed under the Editorial conduct of Professors PAUL F. EVE and I. P. GARVIN; and with but few changes since that time, it has continued to greet its readers with a regularity unsurpassed by any Journal in the country.

Its late Editors, Professor L. A. DUGAS and HENRY ROSSIGNOL, M. D., now retiring, it will be acknowledged have not only well sustained the early character of the Journal, but have kept it well up to the requirements and style of progressive Science, during the six years of their able management.

The plan of the work and the arrangement of the various heads of reading matter will not be changed from that adopted by its recent Editors, as

they appear to us the most convenient, both for ourselves and the reader, that could possibly be chosen. In its publication, we are happy to inform our readers, that the well trained efforts of Mr. J. Morris (the half-brother of the late Publisher, Mr. James McCafferty) have been secured. Mr. M. has been for many years the foreman of the office, and a principal conductor of the printing department, and we can therefore promise satisfaction in the style and execution of the work.

Fully aware of our inexperience in the field of labor we have entered, we can but acknowledge that we are not without misgivings; but an earnest desire to contribute our quota to the promulgation of sound medical doctrine strongly impels us to the obligation, however scant may be our resources for its accomplishment. From our Brethren we invoke that indulgence, which the known liberality of our Profession entitles us to expect.

With this valuable work, so long established, so fostered and so well sustained, we now present ourselves before the Profession, and claim for it in the future, that support which they have so freely given in the past. We earnestly solicit contributions for our pages, and promise to use every effort on our own part to sustain the present character of the Journal, and to emulate our predecessors, at least in their energy and devotion.

HENRY F. CAMPBELL.

ROBERT CAMPBELL.

Augusta, Ga., Jan. 1st, 1857.

PROFESSOR L. D. FORD'S LECTURE.—Accompanying our present issue, our readers will find this highly polished and philosophical production published by the Class. Any encomium of ours, would be inappropriate as well as superfluous; for in it we behold the author himself—too nearly allied to us by position, and the yet closer ties of personal friendship, to allow us the gratification of praising him. "Self-praise is no praise at all," says the old proverb; "Let another man praise thee and not thine own mouth, a stranger and not thine own lips," says the *book* of Proverbs, and the *Book* of books.

THE SOUTHERN JOURNAL OF THE MEDICAL AND PHYSICAL SCIENCES.—This excellent Journal has for a short time disappeared from our list of exchanges from causes not affecting its soundness financially or otherwise. We are glad to welcome it again, and wish it uninterrupted success. In the present number (for June) the Editors say:—"Our next issue, to consist of some 200 pages, will be issued forthwith, and will embrace the months of July, August and September. We will give in a third number the months of October, November and December, so that by the close of the year, our subscribers will have received their full complement of 768 pages."

*Works Received.*—We are indebted to the authors for a large number of works, some of which are highly interesting, and deserve special notice. We regret that we are not able at present to do any more than merely to direct attention to them.

*The History and Statistics of Ovariectomy, and the circumstances under which the operation may be regarded as safe and expedient; being a Dissertation to which the Prize of the Massachusetts Medical Society was awarded, May, 1856.* By George H. Lyman, M. D.

*Transactions of the Illinois State Medical Society, for the year 1856.*

*Transactions of the South Carolina Medical Association, at the extra meeting in Greenwood, July 18, 1855, and at the annual meeting in Charleston, Feb. 8, 1856.*

*The Transactions of the New York Academy of Medicine, instituted 1847. Vol. I.—Part V.*

*Report of the Eastern Lunatic Asylum, in the City of Williamsburg, Va. 1853-4 and 1854-5.*

*Thirteenth Annual Report of the Managers of the State Lunatic Asylum, at Utica. Transmitted to the Legislature, Feb. 9, 1856.*

*Annual Report, with the Medical Report, of the Commissioners of Emigration of the State of New York, for the year ending Dec. 31, 1855.*

*Proceedings of the American Pharmaceutical Association, at the fifth annual meeting, held in Baltimore, Sept. 1856. With a list of the members.*

*First Report of the Woman's Hospital Association, presented to the Executive Committee, at the Anniversary meeting, Feb. 9th, 1856.*

*Essays on the Physiology of the Nervous System, with an Appendix on Hydrophobia.* By Benjamin Haskell, M. D., of Rockport, Mass.

*Encysted Osseous Tumors; or a thin secreting membranous cyst, developed in cancellous structure of bone, and surrounded by a thin bony wall.* By Alden March, M. D., of Albany.

*History of the Ligature applied to the Brachio-Cephalic Artery with statistics of the operation.* (Paper read before the Tennessee State Medical Society, May, 1856.) By Paul F. Eve, M. D.

*Bronchial Injections: a Report, with a statistical table, of one hundred and six cases of Pulmonary Diseases treated by bronchial Injections.* By Horace Green, M. D., LL. D., President of the Faculty, and Professor Emeritus of the Theory and Practice of Medicine, of the New York Medical College, &c.

*Remarks on Vesico-Vaginal Fistula, with an account of a new mode of Suture, and seven successful operations.* By N. Bozeman, M. D., of Montgomery, Ala.

*The Mutual Responsibilities of Physicians and the Community: being an Address to the Graduating Class of the Medical College of the University of Michigan.* Delivered March 27th, 1856. By Henry P. Tappan, D. D., LL. D., Chancellor of the University of Michigan.

Dr. Graily Hewitt exhibited at a meeting of the Pathological Society of London, Mr. Arnott, President, in the Chair, the Lungs on four children who died of *Whooping-cough*.

"The specimens now presented consist of the lungs of four children, who have recently died in the St. Marylebone Infirmary and Workhouse, from

hooping-cough, under the care of Mr. Filbiter. They are illustrative of the lesions which will in almost all cases be found to be associated with the disease, and all exhibit one peculiar lesion in a greater or less degree. 'In these cases certain portions of the lungs will be found, on examination, to present that condition formerly known as lobular pneumonia, but which now is ascertained to be in reality collapse of the lung substance, without necessarily, inflammation of the parenchyma of the lung itself. Particulars of four fatal cases of hooping-cough were then read, together with an account of the post-mortem appearances in each case, of which the following is an abstract:—

In case 1, that of a child aged sixteen months, there was collapse of portions of both lungs, with emphysema and subpleural ecchymosis, some of the collapsed portions presenting minute bronchial abscesses.

In case 2, a child aged twelve months, there was collapse of the lungs, the right middle lobe being quite collapsed, together with the catarrhal or vesicular pneumonia of Legendre and Bailly, and slight depositions of tubercle in one lobe.

In case 3, a child aged eleven months, there was partial collapse of the lungs, together with double pleurisy and catarrhal pneumonia. Maceration and inflammation of the Peyerian and solitary glands of the ileum were also noticed.

In case 4, a child aged fourteen months, collapse of the lungs was also present, with a few bronchial abscesses. This case presented a pathological condition in other respects interesting. The gastric fluid had, after death, perforated the oesophagus one inch above the cardiac orifice of the stomach, and escaping into the left pleura, had eroded the posterior and upper part of the left lung.

In all the cases, slight enlargement of the bronchial glands was observed. The bronchial tubes, especially the smaller divisions, were always filled with a thickish muco-purulent fluid. Emphysema of the lungs always co-existed with collapse of the lung tissue.

REMARKS.—The points of interests in these cases may be now briefly recapitulated. The subjects were all infants of tender age—from ten to sixteen months old. The collapse of the lungs was found. It presented for the most part the usual characters, and with it was associated emphysema of the neighboring lobes or lobules. This is an important fact, as related to the physical examination of the chest during life. Small bronchial abscesses were also present in most of the cases. The history of these cases during life illustrates one or two points important to bear in mind with reference to hooping-cough in very young children. Only one of them was observed to hoop. So far as I have observed, the intensity and frequency of the hoop is a circumstance of good augury, rather than the reverse. The treatment adopted in these cases was of a stimulating character, mild expectorants, and ammonia, together with a little wine, and counter-irritation by means of blisters. The unfavorable hygienic conditions in which the children were placed, however, coupled with their tender age, precluded a favorable result. Death took place, on an average, about three weeks after the commencement of the disease."—[*London Lancet*.

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*Phosphate of Iron in Human Bones.*—Nikles has described two strongly coloured blue-green bones (the cubitus and the radius of a female skeleton),

which he found in the burial-ground at Eumont. The bones were coloured through their entire mass. Nikles found that this colour was due to the presence of phosphate of iron which existed in a crystalline form in the bones, and considers that the existence of this salt was due to the circumstance of the bones lying in ground impregnated with ferruginous water, which had decomposed their phosphate of lime.—[*Ibid.*]

*External Application of Ergotin.* (Translated by CH. F. J. LEHLBACH, M. D., Newark, N. J.)—Dr. Hoppe, Professor of Basle, recommends in his medical letters the external use of ergotin. This induced Dr. V. Brenner, at Ischl, to make trials with this remedy, and he obtained satisfactory results. According to Dr. V. Brenner, the character of disease prevailing in that region at present, is the typhoid, tending to decomposition of the blood. Acute inflammations are seen very rarely, and those that occur, have a tendency to assume the typhoid form, so that the abstraction of blood is not only of no avail, but acts injuriously, by diminishing the forces of life very rapidly. This typhoid character, which is prevailing, exercises its influence upon wounds and ulcers. It is very difficult in cases of wounds and ulcers to induce a sufficient amount of reaction, necessary to establish the process of healing. Left to themselves, a long time passes, until suppuration and granulation take place. The same thing is observed after operations. Wounds can almost never be brought to heal by first intention. If, on the fourth day, the dressings are removed, the wound gapes as before, without a trace of inflammation and suppuration. Under these circumstances, a dressing as that of ergot is exceedingly valuable. Under its application the wound or the ulcer soon becomes more lively and clean; it begins to suppurate and granulate; there arise no exuberant granulations, and cicatrization takes a very rapid course. Brenner's usual formula is—

R.—Axung. porc. ʒj;  
Ergotini ʒss. to ʒij. M.

With this salve the wound or ulcer is dressed twice a day.

[As a similar typhoid character is prevalent among us at present, and a similar difficulty of inducing healthy inflammation in wounds and ulcers, the remedy recommended thus by good authority might be worth a trial.]

*N. O. Med. News and Hospital Gaz.*

*Effects of Digitalis on Generative Organs.*—M. Brughmanns says, that if from 35 to 40 centigrammes of pulv. digitalis be given for five or six days, the most complete hyposthenizing effect is produced on the generative organs. He has thus given it with very great advantage to combat erotic excitement, whether due to excitable temperament, sedentary life, stimulant regimen, or the privation or excess of venereal pleasures, etc. He also finds it very useful in subduing the inflammatory accidents that so often accompany syphilitic diseases, and which may be prevented by its early administration. It is pre-eminently useful when phymosis or paraphymosis, chordee, epididymitis, or adenitis are either present or feared.—[*Review Méd. Chirurg.*, and *Ibid.*]

*Preparation of Caustic with Gutta Serena.*—M. Richard has recently brought this before the Paris Society of Surgery. Gutta serena in powder is intimately mixed with pulverized caustic in proportions according to the

strength required, as, e. g., two parts of chloride of zinc to one of gutta percha. The mixture is to be gently heated in a tube or porcelain capsule, over a spirit lamp. The gutta percha softens, and becomes thoroughly impregnated with the caustic, so that on cooling a gutta percha port-caustic is formed. By its properties the gutta percha possesses the advantages of not altering the tissues, of preserving its consistence and flexibility, of insinuating itself by its suppleness into either natural or abnormal canals, however tortuous, of assuming any desired form under the fingers of the Surgeon, and of allowing, by reason of the porosity of its molecules, the exudation and unimpeded action of the caustic it contains.—[*Journal de Chimie Med.*, 1856, and *Ibid.*

*Air Poison.*—People have often said that no difference can be detected in the analyzation of pure and impure air. This is one of the vulgar errors difficult to dislodge from the public brain. The fact is, that the condensed air of a crowded room gives a deposit which, if allowed to remain for a few days, forms a solid, thick, glutinous mass, having a strong odour of animal matter. If examined by the microscope, it is seen to undergo a remarkable change. First of all, it is converted into a vegetable growth, and this is followed by the production of multitudes of animalcules; a decisive proof that it must contain organic matter, otherwise it could not nourish organic beings. This was the result arrived at by Dr. Angus Smith, in his beautiful experiments on the Air and Water of Towns; wherein he showed how the lungs and skin gave out organic matter, which is in itself a deadly poison, producing headache, sickness, disease, or epidemic, according to its strength. Why, if “a few drops of the liquid matter, obtained by the condensation of the air of a foul locality, introduced into the vein of a dog, can produce death with the usual phenomena of typhus fever,” what incalculable evil must not it produce on those human beings who breathe it again and again, rendered fouler and less capable of sustaining life with each breath drawn? Such contamination of the air, and consequent hot-bed of fever and epidemic, it is easily within the power of man to remove. Ventilation and cleanliness will do all, so far as the abolition of this evil goes, and ventilation and cleanliness are not miracles to be prayed for, but certain results of common obedience to the laws of God.—[*Dickens' Household Words*, from *Edin. Med. Jour.*

*Poisoning by Chloroform.*—Ricord extirpated the testicle of a strong man, 38 years of age, and with all caution let him inhale a very good chloroform. After half a minute narcosis had completely set in without convulsions, the operation was performed. After the chloroform had been taken away for some time, all at once the pulse ceased to beat, respiration stopped, death-like paleness overcame the patient, who turned the eyes upwards and seemed to be dead. Instantly Ricord threw himself over him, and putting his mouth to that of the patient, blew air in it, which he expelled again by compression of the thorax. After this had been done twice, pulse and respiration returned; the color improved, and after half a minute the patient commenced to speak. Ricord makes the following reflections:

1. In consequence of hemorrhages or violent emotions, syncope not seldom occurs after these causes cease. Just the same with chloroform. 2.

The difference of the action of chloroform depends less on the purity of the article, as Dédillot asserts, but, like with other medicines, from idiosyncrasis. The above treatment of poisoning by chloroform is, according to Ricord, who often had resort to it, safer and quicker to apply than any other counter poison.—[*Jahrb. d. ges. Med. Journal of Pharmacy.*]

*Small-Pox Contagion Prolonged.*—An instance is reported in the Medical Examiner of the prolongation of small-pox contagion five years. The disease prevailed in Oglethorpe county, Georgia, pretty extensively, in 1851. A second wife having been introduced during the present year, into a family which had suffered with the disease in 1851, and a general upturning of the domicile having taken place in consequence, during which all the old clothing, bedding, carpets, &c., were handled and exposed, the small-pox attacked the wife and a servant, neither of whom had been from home, nor had any suspicious person been to see them. They had not been to or passed through any town. They lived five miles from the nearest town, and had no intercourse whatever with any person from whom they could have contracted the disease.—[*Memphis Med. Recorder.*]

*Ice vs. Yellow Fever.*—Mr. Meriam, the meteorologist, has suggested that a recently invented ice-making machine may be used to prevent and to check the progress of yellow fever, by the mere power of refrigeration. The air in both ships and dwellings may by this means be kept at the freezing temperature at will, and thus free them from the epidemic influence. Mr. M. thinks that infected vessels can be cleansed in forty-eight hours, and then released from quarantine, and that fomites can be purified in the same way. He even proposes the construction of ice-docks, in which the outer as well as the inner part of the vessels can be refrigerated. Without expressing any opinion upon the necessity, or efficacy, of such disinfecting agency for ships and goods, we should hail as a great boon, any contrivance which will have the effect to release commerce from the onerous burden, and murderous influence of quarantines. According to all experience it is of little avail to prove a thousand times over, the entire uselessness of such quarantines as are commonly instituted, but it might be less difficult to impress upon human credulity the conviction that refrigeration with artificial ice is an infallible disinfecting agency.—[*Ibid.*]

*New Operation for Phymosis.*—The cavity of the prepuce is filled with cotton or lint, so that the mucous membrane will be put as much on the stretch as the skin. A circular incision then makes a complete division of both, while the glans is protected from injury by the cotton or lint. This obviates the necessity of cutting the skin and mucous membrane separately, rendering the operation more simple and less painful.—[*Ibid.*]

*A New Method for the Speedy Application of Leeches.*—Dr. Avenier de Lagree, in the *Gazette des Hôpitaux*, gives the following notice of his method of applying leeches:

"It is well known how tedious and difficult, not to say impossible, it is, especially in winter, to cause a number of leeches to adhere to the integuments to which we wish to apply them. I have lately discovered the following method, which I doubt not will be welcomed, since it accelerates in

a remarkable degree the functions of these valuable annelides. Having selected the spot to which they are to be applied, cover it with a sinapism, which is to be allowed to remain some time, in order to effect congestion of the capillary vessels. Then wash the place carefully, and place the glass containing the leeches upon it. In a few minutes they will all take hold and draw with an energy and rapidity quite remarkable. After the leeches fall off, the flow of blood from their bite is more abundant, and continues for a longer time, than under ordinary circumstances."—[*Nashville Jour. of Med. and Surg.*

*Abscess of Tibia—Amputation.*—Dr. Willard Parker showed a leg which he had that day removed from a man aged 35 years. He was of good constitution, and fifteen years ago had sprained his left ankle. Five years after the accident, he consulted Dr. P., who directed the usual remedies for inflammation, and enjoined repose. In January last, he had inflammation in the joint, and three months ago the doctor was called in to amputate. He advised delay, and found no ulcer, but some pus over the internal malleolus, which he discharged. Within ten days past he has had a return of the violent symptoms, since which time his suffering has been intense, nearly equalling that of tetanus. On examination of the limb after amputation, the tibia was found to contain an abscess, such as are particularly described by Brodie. No pain had been produced by pressure of the foot against the leg. Dr. Parker had seen a similar abscess in the femur of a woman, some years ago.—[*Med. and Surg. Rep.*

*Extensive Injuries during Pregnancy.*—In this city, last winter, a robust German female, about 26 years of age, and five months pregnant, fell into a well, and descended 51 feet! She suffered an oblique fracture of the thigh, complete dislocation of the knee-joint, and a fracture of the tibia and fibula just above the ankle! At no time after the accident did she manifest any signs of abortion, but went her full time, and was delivered, some time in June last, of a well-formed, healthy child. It may not prove uninteresting to mention that, during the pregnancy, the fracture in the vicinity of the ankle-joint failed to unite. After delivery, the process of reparation commenced, although slowly, and she is now regaining the use of her limb.—*Dr. H. Tyler Smith's Obstetric Lectures in London Lancet.*

*Considerable Hypospadias; Fecundation.*—Dr. Taxel, of Kremsier, (*Weiner Med. Wochenschrift*, 1856,) was lately called upon to decide upon the sex of a child, which presented exactly the same genital malformation as its father. The latter had hitherto been taken for a woman, and sleeping habitually in the same bed with a fellow farm-servant, really of the female sex; the child had been the consequence of that circumstance. The following is the condition of the father:—The penis is shorter than usual, but thicker and imperforate; the scrotum is divided into two sacs, each of which contains a testicle. At the root of the penis, in the anterior commissure of the sacs, there is a foramen, which would admit a small pea, and from that foramen springs a groove running along the under part of the penis. There is no prepuce. In the groove, and about a line behind the corona, are two elliptical openings, large enough to admit a bristle, and another small hole is observed further back, two lines from the urethral



orifice. The author of the paper is inclined to believe that the anterior foramina are the orifices of the ejaculatory ducts, and that by their means fecundation had taken place. Perhaps it would be simpler to look upon them as the openings of the mucous ducts usually found in this region, and to conclude that fecundation had taken place at the foramen allowing of the passage of the urine.—[*London Lancet*.]

*Diminished Frequency of Croup.*—Dr. Kuttner, Physician to the Children's Hospital at Dresden, observes, that while Gollis, at the commencement of the century, met with 1,663 cases within five years, and other practitioners regarded it as the most frequent of children's diseases, the number of cases seems, during the last thirty years, to have undergone great diminution. In the Dresden hospital, among 13,120 patients during twenty years, only 33 cases (21 boys and 12 girls) have occurred, i. e. 1 in 400, although inflammatory diseases of the respiratory organs are of common occurrence among the Dresden population.—[*Journal für Kinderk. Virginia Med. and Surg. Jour.*]

*Case of Aneurism with Contraction of the Pupil.* By Dr. W. T. GAIRDNER.—The patient, a middle aged man, had come under Dr. Gairdner's notice at the Royal Public Dispensary, and, from one of the eyes presenting a well marked diminution in the size of the pupil, Dr. G. was at once led to examine the chest, when evidence of the existence of an aneurism (probably of the arteria innominata) was obtained. The case was of interest, as it added another to the rapidly increasing number of cases in which this remarkable sign had been noticed.—[*Edinburgh Med. Jour.*]

*Statistics of Chemists and Druggists.*—In 1831, the number of chemists and druggists in England was 5935; while in 1851, there were 3632 men and 12 women carrying on the business under the age of twenty years, and 11,701 men and 298 women of twenty years of age and upwards (exclusive of 15,163 surgeons and apothecaries); making a total of 15,643 persons, unrestricted, uncontrolled, and irresponsible, with a stock-in-trade sufficient to depopulate the whole continent of Europe.—[*Letter to "The Times," condemnatory of the Sale of Poisons.*]

*Method for the Detection and Quantitative Estimation of Quinine and other Alkaloids when combined with Fatty Oils.*—If, for example, the presence of quinine, as well as its quantity, in cod-liver oil have to be determined, agitate strongly a measured quantity of the oil with a solution of sulphate of soda in water slightly acidulated with sulphuric acid. After the aqueous liquor has separated, by rest, from the oil, separate by means of a pipette rather more than half the aqueous solution employed. Filter this solution to remove a few adhering globules of oil, and then measure off exactly one half of the quantity of the aqueous solution originally added to the oil. Precipitate the quinine, if present, from this filtered solution by means of caustic soda; slightly wash the precipitate with water and redissolve it in alcohol; filter, and evaporate the filtrate to dryness on a water-bath; the residue will represent one-half of the quantity of quinine present in the quantity of cod-liver oil measured off.

The precipitate obtained from the solution by the caustic soda should

be examined by the methods described in the ordinary manuals of chemical analysis, to learn whether it be quinine or not.

The method described for separating quinine from cod-liver oil is applicable for the separation of other alkaloids when combined with fatty oils.—(Bastick).—[*London Lancet*.]

*The Late Case of Poisoning by Croton Oil.*—Gallagher, the soldier of the 89th Regiment, who was condemned to death for "administering Croton Oil with intent to murder," and in whose defence we wrote an editorial in our last number, which was approved of and commented on by our confrères of the daily Press, has since had his sentence commuted to five years in the Provincial Penitentiary.—[*Montreal Med. Chron.*]

*Death from Chloroform.*—A patient recently died at St. Thomas's Hospital, London, from the effects of this anæsthetic administered prior to an amputation of a finger. The house-surgeon, assisted by another gentleman, had the sole management of the case, the Surgeons of the Hospital having been absent.—[*Western Lancet*.]

*The Use of Glycerine for the Preservation of Organic Bodies.*—Luton states that animal and vegetable substances may be kept for a long period perfectly free from decomposition when immersed in glycerine. He also finds that it is a good antiseptic agent for injecting dead bodies.—[*N. O. Med. News and Hosp. Gaz.*]

*Remarkable Case.*—Mrs. Julia Syles, wife of John Syles, of Blackstone, died on the 14th ult., of dropsy, from which she had suffered for five years. During that time she had been tapped upwards of one hundred and forty times, and more than three thousand pounds of water were extracted.—[*Id.*]

*Secretion of Butyric Acid by Beetles.*—Pelouze states, that many kinds of the species *Carabus*, when they run about, leave behind a foetid liquid, secreted from a gland near the anus, which, as he has proved, contains butyric acid.—[*London Lancet*.]

*Honors to Dr. Von Iffland.*—It affords us much pleasure to announce to our readers the election of Dr. Von Iffland, of Quebec, to the distinguished position of a Corresponding Member of the Epidemiological Society of London. The report was mooted last month in the letter of our London Correspondent, and we now are enabled to substantiate it by a more personal confirmation. We are also informed that Dr. Von Iffland is about being created a Fellow of the Royal College of Surgeons, of which corporation he has been for very many years a member. The latter appointment is pre-eminently *distingué*, and places our talented collaborateur and esteemed friend upon an eminence of celebrity, enjoyed, we believe, by only one other gentleman in the Province. We are sure these just honors will be as gratifying to the numerous friends of the worthy Doctor upon whom they have been "so thickly showered," as to ourselves.—[*Montreal Medical Chronicle*.]

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A FEW HINTS RELATIVE TO THE COLLECTION OF SOME INDIGENOUS DRUGS.

It is a matter of some importance to the thorough pharmacist to keep in mind the proper time of gathering plants and barks, roots, leaves and other parts of plants, in reference to laying up a store for future use, and for the manufacture of quantities of preparations requiring them to be used at the period of their greatest medicinal power.

*Wild Cherry Bark.*—According to the results of Mr. Perot, the proper period of collecting wild cherry bark is in the fall, September or October, as then it contains a larger proportion of amygdalin, and consequently yields more hydrocyanic acid and volatile oil than in the spring or summer.

*American Senna.*—According to the late Dr. R. E. Griffith, (*Medical Botany*, p. 261,) American senna leaves should be collected when the fruit is ripe or nearly ripe, which is in September.

*Dandelion Root.*—Roots generally, as is well known to many, should be collected in the fall months, and before frost sets in. This is especially true of taraxacum, which in October has its juices well stored with the bitter principle, the presence of which is usually considered an index of medicinal power, although we believe physicians have yet to prove on what constituent of the plant that power depends.

*Pith of Sassafras.*—An experienced collector of medicinal plants informs us, that pith of sassafras should not be collected until *after* the 15th of October, as when removed before that time it frequently assumes a brown hue, probably from the presence of juices subsequently removed by absorption, as the period of suspended vegetation approaches.

*Diospyros—Unripe Persimmons.*—Formerly the bark of the persimmon tree was the part made officinal, but in the Pharmacopœia of 1850, the unripe fruit was substituted, which is now the proper officinal substance to be dispensed under the name "Diospyros." The fruit should be collected when it has attained its full size, and on the point of changing color, but before the conversion of tannin into sugar has commenced, a change rapidly promoted by frost. In September is the time for the collection of this fruit. When not used fresh, it should be sliced and dried in a warm situation with free circulation of air.

*Dulcamara.*—The terminal twigs of *bitter sweet* should be collected in October, or after the fall of the leaves, and, for convenience of division by the mill or pestle, should be cut in short transverse slices, not over half an inch in length; a treatment which also favors their dessication.

*Ulmus.*—Slippery elm bark, as found in the market, varies much in appearance and quality; sometimes its color is uniform throughout, fibrous and full of mucilage, with but little astringence. At other times its fibrous character is wanting, and the bark breaks transversely without difficulty, is much less mucilaginous, and consists chiefly of cellular structure. Again, it is met with much discolored and with portions of the outer bark adhering. Now it is highly probable that the season of collection has a marked influence on the structure and medicinal value of the bark; yet we *know* so little, positively, of the times and circumstances of collecting the varieties of commerce, that it would be, perhaps, presumption to hazard an opinion, and therefore suggest that some pharmacist, who has the opportunity by location, will investigate the influence of season on the character of the inner bark of *Ulmus Fulva*.—[*Am. Jour. of Pharmacy*.

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## ORIGINAL AND ECLECTIC.

### ARTICLE IV.

*Ancient Medicine.* By W. T. GRANT, M. D., of Wrightsboro',  
Columbia county, Ga.

In the preparation of an article published during the past summer in the *Atlanta Medical and Surgical Journal*, captioned *Diseases of the Bible, &c.*, I had frequent occasion to refer to the ancient historians, Tacitus, Herodotus, Thucydides and Josephus, for the purpose of substantiating certain conclusions at which I arrived in the course of my investigations upon that subject. In examining those works, I found a great deal of very interesting medical matter, and I have since concluded to give a condensed account of it to the Profession. I conceive that it presents many points of very great interest, and also demonstrates most incontestibly the antiquity of a number of our remedial appliances. I am not ignorant of the fact that works have been published upon this subject—ANCIENT MEDICINE; but as such works possess but little interest for the generality of medical men, they have but a limited circulation, and a monograph upon the subject would therefore, from its very brevity, be far more interesting.

The earlier lights of the Profession were few in number, and with some of them we are sufficiently well acquainted to need no notice in this place. The practitioners of Medicine in early times

were undoubtedly as numerous, in proportion to the population, as they are now. "Every great family, as well as every city, must needs (as Herodotus expresses it) swarm with the faculty." The medical men of Egypt were renowned in those early times; Cyrus had a physician sent him from Egypt, and Darius always had Egyptian physicians with him. But of all, I propose to give a sketch of one only—Damocedes. "He was a physician of Crotona, and the most skillful practitioner of his time." Damocedes, it is presumable, lived in Crotona during the earlier portion of his life, but was induced to remove thence by "the austere manner of his father, which becoming insupportable, he left him and went to Ægina. In the first year of his residence at this place, he excelled the most skillful of the medical profession, without having had any regular education, and indeed without the common instruments of the art. His reputation, however, was so great, that in the *second* year, the inhabitants of Ægina, by general consent, engaged his services at the price of one talent (nearly one thousand dollars of our currency). In the *third* year, the Athenians retained him at a salary of one hundred minæ (about sixteen hundred dollars); and in the *fourth* year, Polycrates engaged to employ him at two talents. His residence was then fixed at Samos; and to this man the physicians of Crotona are considerably indebted for the reputation which they enjoy; for at this period, in point of medical celebrity, the physicians of Crotona held the first, and those of Cyrene the next place." (Herodotus 3. 131.)

We have made the above quotation from Herodotus, not only for the purpose of sketching the character of Damocedes, but also to add more evidence in demonstration of the fact that physicians were quite abundant in former times.

Herodotus mentions two cases in which Damocedes was engaged with success, and which are of much interest. The first was in the person of Darius, who, in leaping from his horse on one occasion, "twisted his foot with so much violence that the ankle bone was quite dislocated." This was a dislocation of the ankle-joint,—or, to be more surgical, it was a luxation of this joint. Darius had some Egyptian physicians with him at the time, who, however, increased the evil by twisting and otherwise violently handling the affected part. He was in very great pain, which indeed was so extreme that he "passed seven days and as many nights without sleep." And on the eighth day Damocedes was mentioned to

him as being a skillful physician, for whom he sent immediately; "who applied such medicines and strong fomentations as were customary in Greece, by which means Darius, who began to despair of ever recovering the entire use of his foot, was not only enabled to sleep, but in a short time perfectly restored to health."

The second case occurred in Atossa, the daughter of Cyrus, and wife of Darius, who "had an ulcer on her breast, which finally breaking, spread itself considerably." Damocedes succeeded in curing it, but by what means we are not informed.

While upon this subject, we *may* introduce also the following two cases:—Miltiades, the Athenian general, in getting over a fence, in some way dislocated his femur, and never recovered from it. It mortified, and growing worse, finally killed him. (Herodotus 6. 134–136.)

The following case may be believed or not, as the reader likes; I give it as I find it:—Hegeiestratus was in prison, in Sparta, and bound in irons. He was threatened with death, and preferred any means of escape to such an event. Therefore, procuring a knife, he cut off as much (one-half) of his foot, as would enable him to extricate himself from his irons; after which, he dug out of prison, and made his escape to Tegea. "When his wound was healed he *procured himself a wooden foot*, and become an avowed enemy of Sparta.

Of the Practice of Medicine, Herodotus gives us a very complete although concise account. He says, that among the Babylonians they had no distinct profession of medicine, but in cases of sickness, pursued the following course. Such as were diseased among them they carried into some public square, and every one who passed by, had to interrogate the sick as to the nature of their disease, and if he had either been afflicted with a similar disease himself, or seen its operation upon another, he may communicate the process by which his own recovery was effected, or by which, in any other instance, he knew the disease to be removed. And no one was allowed to pass by an afflicted person in silence, or without inquiry into the nature of his complaint.

Among the Egyptians, medicine was practised as follows:—  
"One physician is confined to the study and management of one disease; there are of course a great number who practice this art; some attend to disorders of the eyes, others to those of the head; some take care of the teeth, others are conversant with all diseases

of the bowels; whilst many attend to the cure of maladies which are less conspicuous." Our author says that the Egyptians used "purgés, vomits, and clysters, for three days successively every month," as a matter of health, under the impression that the diseases of the body are occasioned by the different elements received as food. He offers himself the opinion that, "changes of all kinds and those in particular of the seasons, promote and occasion the maladies of the body."

Herodotus mentions but two cases in which the special senses were affected—one the son of Croesus, affected with dumbness; the other, a soldier named Epizilus, who was suddenly and inexplicably struck blind in the midst of a battle.

Josephus makes frequent mention of dumb and blind persons, but does not give any particulars. He says that when David besieged Jerusalem, the citizens of the place, in contempt, placed upon the walls of the city, in full view of David's army, all their lame and dumb and blind, from which we may justly infer that their numbers were considerable.

Tacitus introduces a very interesting case of blindness, which I am inclined, from the description, to think was Pterygium. It also falsifies the assertion of Pettigrew, that the royal gift of healing originated in England with Edward the Confessor. I will quote the case in Tacitus' own language. Vespasian, the Roman emperor, was spending some months at Alexandria, when "a man of mean condition, born in that city, had lost his sight by a defluxion on his eyes. He presented himself before Vespasian, and falling prostrate on the ground, implored the Emperor to administer a cure for his blindness. The request was, that the Emperor, with his spittle, would condescend to moisten the poor man's face and the balls of his eyes. Another man, who had a paralytic hand, begged that the Emperor would tread on the part affected. Vespasian smiled at a request so absurd and wild. The wretched objects persisted to implore his aid. He dreaded the ridicule of a vain attempt; but the importunity of the men, and the crowd of flatterers, prevailed upon the Prince not entirely to disregard their petition. He ordered the physicians to consider among themselves, whether the blindness of the one, and the paralytic affection of the other, were within the reach of human assistance. The result of the consultation was, that the organs of sight were not so injured, but that, by removing the film, or cataract, the patient

might recover. As to the disabled limb, by proper applications and invigorating medicines, it was not impossible to restore it to its former tone. Accordingly, in the presence of a prodigious multitude, all erect with expectation, the Emperor advanced with an air of serenity, and hazarded the experiment. The paralytic hand recovered its functions, and the blind man saw the light of the sun."

In regard to Obstetrics, Herodotus is not so full as upon other subjects. He *merely* mentions three cases—one a case of still-born child; another, a case of twins; and the third, a case of abortion from violence. It occurred in the person of the sister and wife of Cambyces, and was produced by violence he used towards her.

Tacitus mentions a similar case to the last, and which was likewise fatal. It was Poppæa, the wife of Nero. When she was advanced in pregnancy, for some trivial cause he gave her a kick on her womb, from which she died. We presume that abortion was the result in this case, and was the cause of her death, although we are not informed that it was so.

We may gather from a remark of Tacitus, that abortive remedies were quite common in ancient times. It appears that Octavia, the wife of Nero, was much addicted to adulterous commerce. "Nero issued a proclamation, declaring the guilt of Octavia, and added, that by the use of medicines to procure abortion, she had thrown a veil over her adulterous connections, and the facts were said to be clearly proved."

Josephus mentions *only* that abortion could be produced, and adds, the punishments that were inflicted by law upon any one who procured the abortion.

We may, while upon this part of our subject, introduce the following from Herodotus, in proof of the existence of hysterical affections. I believe that obstetricians consider that these affections are the result of our modern refinements; but this opinion is refuted by Herodotus. The Budini were a rude and barbarous people. In their country there was a "large lake, with a marsh surrounded with reeds. In this lake are found otters, beavers, and other wild animals, who have square snouts: of these the skins are used to border the garment; and their testicles are esteemed useful in hysterical diseases."



## ARTICLE V.

*Inverted Toe Nail—Treated without Operation.* By ROBERT CAMPBELL, M. D., Demonstrator of Anatomy in the Medical College of Georgia,

On page 45, of our last number, we have inserted an article under the above heading, from the *London Lancet*. The suggestions of Dr. J. Broke Gallway, therein conveyed, have, it is true, the merit of novelty, and moreover of affording some slight amelioration of the barbarous practices so long in vogue, for the relief of this painful affliction.

Dr. G.'s recommendations and the ordinary mode of procedure, are alike subject to several considerable disadvantages; of which, the most prominent are, the extreme severity of such an operation, and the inadequacy of the same, to the securement of permanent relief—as after repeated divisions and disruptions of a portion of the nail from its exquisitely sensitive matrix, it may repeatedly be reproduced, the part generally remaining exceedingly tender on pressure.

Always dissatisfied with the various modifications of the operation that contemplates evulsion of the nail, which we have long deemed an unwarrantable measure of torture, in the treatment of this most *excruciating trifle*,—in the year 1851, having an opportunity of experimenting in a severe case of this affection, we endeavored to devise some expedient, which might answer the indication, (of keeping the nail apart from the irritated flesh,) by affecting the position and condition of the *flesh* itself, *by pressure*, as a substitute for the only plan we had ever seen proposed in the journals, or in systematic works on Surgery, whereby an operation was involved.

From the entire success of this experiment, we have treated all the cases which have fallen in our way since, in the same manner—some of which were very unpromising in appearance—and have never had occasion to abandon it in any one case, or seek its modification. The condition of the part results, most probably, from the use of too narrow a shoe, which contracts the toes into so small a compass, as necessarily to force the flesh at the margins of the great toe above the nail, from the lateral pressure of the inner side of the shoe, from within, and the other toes from with-

out. The difficulty occurs most frequently, we believe, on the outer side of the great toe nail, from the fact, that the second toe becomes depressed habitually, from this cause, and is impacted against the lower portion of that side of the great toe, and being pushed upward by the pressure of the ground from below, in walking, together with the lateral pressure, forces the flesh against the nail, (which has not, necessarily, more than its normal breadth,) until it becomes irritated, sore and swollen, the inflammation often resulting in a fungous growth, (see cut, p. 74,) which is sometimes so sensitive as to disable the limb entirely.

The indication is to adapt an apparatus of counter-pressure, at the same time training the second toe to such a position, that it will be available afterwards, as a natural, permanent compress, for the prevention of a repetition of such an obtrusion.

This apparatus is formed of a bandage somewhat broader than the length of the nail—say  $\frac{3}{4}$ th of an inch and  $1\frac{1}{2}$  yards long, having a roll at one end about  $\frac{1}{4}$ th of an inch thick, to be used as a compress, to which the last turn of the bandage is tacked, to prevent the disposition, otherwise, to unroll on traction. This compress is applied in the groove, between the flesh (which is generally much enlarged) and the nail. The margin of the compress, at which the last turn of the bandage is sewed, must present always upward and opposite to the direction in which the pressure is to be exerted—i. e., if the outer border of the great toe on the right side is affected, the seam should be directed upwards and towards the left side of the patient. Thus applied, the bandage will become somewhat wound around the outer side of the compress, which is to be pressed, at first, very gradually and tenderly, but somewhat forcibly, downwards and outwards, until secured in that position by several turns of the bandage around the great toe, carrying it first down, between that member and the second toe, and around several times. The great toe is then to be depressed and forced outwardly, under the second, which is placed upon the compress, and lightly bound in that position by a few turns of the bandage. (The following wood-cut will exemplify its mode of application.) The projection beyond the compress, in front of the toe, is intended to represent a fungous growth or enlargement of the lateral ridge.

The advantages of this treatment over the operation, will, no doubt, be apparent to every one—as substituting a practice as

shocking to the operator as agonizing to the subject; which considerations, in many instances, rendered the art a perfect nonentity in reference to these cases—detering the Surgeon, as well as the patient, from all attempts at relief, and entailing upon the latter months, perhaps years, of comparative indolence or of unmitigated suffering, and upon the former, the opprobrium of incompetency—on account of the frightful nature of the only alternative.



This bandage should be re-applied, at least, as often as once a week. If the prominence of flesh, against which the compress is to rest, is very irritable, a layer of lint, anointed with simple cerate, should intervene. At the first impression of the compress to the sore flesh, the patient experiences some degree of pain or soreness; but the very prompt abatement of suffering following the relief of the inflamed tissues from the irritation of the sharp nail, and also the diminished turgescence of the part, induced by the uniform pressure of the compress and bandage, will prove an ample recompense. The comfort of the patient and celerity of recovery are much enhanced by keeping the limb in an elevated position. It is a matter of surprise, bordering upon astonishment, to see the great diminution of sensitiveness in the part, at each succeeding application of the apparatus. Six or eight weeks

is time sufficient for relief, generally, or for such an improvement as to render it safe to entrust the case to the care of the patient.

We have been thus minute and comprehensive in the above detail, in order that we might be comprehensible—hoping that the suggestions which, confiding in our experience, we have ventured to advance—though contrary to “written law,” may not fall into disrepute through inefficiency of application.

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ARTICLE VI.

*A Lecture on Traumatic Tetanus, with Notes of Cases*—Delivered to the Class, at Jackson-street Hospital, by HENRY F. CAMPBELL, M.D., Professor of Surgical Anatomy, etc., in the Medical College of Georgia.

GENTLEMEN,—There are some diseases, fortunately but few, about the pathology of which, there exists so much uncertainty and whose manifestations are wrapped in so much mystery, that we are left for the present, but to observe and to record what we see, without daring to attempt the perilous task of interpretation. Hydrophobia is one of these diseases, and Tetanus is another. Both evidently diseases, when considered according to all rational symptomatology, of the nervous system, closely analogous to each other in their general bearing, but differing most widely in many of their most prominent manifestations. It is not my intention, to-day, to discuss before you the differential relations of these two terrific maladies, or to present a full account of even one of them in all its bearings, but to present to you the history of the case of the boy Cornelius, with that of another recently treated by us, and to make such comments upon them as I may deem useful to you hereafter in the management of such cases.

The term Tetanus from the Greek verb *Τίτω*, to stretch, or *Τεταγος*, stretched, refers to a most prominent, and what is considered by some, the pathognomonic symptom of the disease, viz: the permanent and unbending rigidity of the muscular system, or at least the voluntary muscular system. Trismus, another term of Greek origin, signifying to gnash, relates to another symptom not quite so constant as the rigidity, but which has for a long time supplied the popular name for the disease, viz: *lock-jaw*, though properly, this is but a partial tetanus, confined principally to the

elevator muscles of the lower jaw, causing inability to open the mouth.

Tetanus has been distinguished, 1st, relatively to the causes which have produced it, into traumatic and idiopathic or spontaneous; 2ndly, relatively to its locality, into general and partial; 3rdly, relatively to the character of the contractions into straight and curved, perfect and imperfect tetanus.

Traumatic tetanus is that which succeeds an injury of any kind, the introduction of a foreign body into sensitive parts, such as the foot or head, a lacerated wound, the bite of a dog, or other animal, a bruise or a surgical operation. That tetanus termed idiopathic or spontaneous is that which manifests itself, not indeed *without* cause, but under the obscure influence of predisposing or occasional causes, such as great and sudden elevations of temperature, excessive cold, the suppression of habitual evacuations from the system, or strong emotions—these last two, however, I will remark in passing, occur almost invariable in the case of females, and are doubtless spurious cases of tetanus, but genuine cases of Hysteria, that notorious “mimic of all diseases.”

The various preparations of *nux vomica* also produce symptoms strongly simulating tetanic spasms, the first approach of which are always anticipated and regarded as an indication to abandon or modify their exhibition.

Some authors lay much stress on the temperature of the atmosphere, and especially in relation to cold as a cause of tetanus; to this I cannot give an assent, but it is certain that particular localities and also certain unexplainable conditions of the atmosphere, do seem more favorable to its occurrence than others. If I mistake not, it is the opinion of the Profession in Savannah, that the disease is of more frequent occurrence in that city and vicinity, than in most other parts of the State. In the summer and autumn of 1855, Dr. J. J. Robertson, of Washington, related to me the sketch of an epidemic in the neighborhood of that place which he and I both thought presented many of the prominent characteristics of tetanus. It was confined to the negroes of a few plantations in Wilkes county, of this State, and was marked by great fatality. It was shortly after the disappearance of the affection in that region, that there appeared in this place an unusual number of cases, and among them, three or four of the *white* population, which is almost unheard of ordinarily in this region.

It is the opinion of Professor L. A. Dugas, that it is much more fatal among negroes in this climate, and if I state him correctly, he has never seen a white patient die here of it. According to M. Chomel, the form of tetanus termed trismus nascentium is very common among the negro infants in the Antilles, and he attributes it to the fact that but little care is taken there to guard against the vicissitudes of climate, and the little attention paid to the umbilicus during the first few days after the birth of the child. This form is very fatal on the rice plantations below Savannah among negroes, and has been variously accounted for: Dr. J. M. Sims' theory in regard to it is, that the position of the infant, viz: on the back, with the occiput impinging up a resisting surface favors the occurrence of the disease. I forbear from making any suggestions for the treatment of this form of the disease, it is sufficient to say, that it is generally fatal in a few days, and treatment, generally, but hastens the denouement and adds to distress of the patient.

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As a case well calculated to illustrate the course of traumatic tetanus, I will read to you the following, which I have just translated from the *Revue de Thérapeutique Médico-Chirurgicale*—Paris, December 1st—for the Southern Medical and Surgical Journal; it is entitled “Traumatic Tetanus cured by Chloroform,” and demonstrates the efficiency of a remedy which I think is rapidly gaining favor with the profession, in all parts of the world, in the treatment of this truly fearful disease; it is reported from the notes of M. Busquet, of Bordeaux.

“CASE I. A little girl, aged nine years, fell and received a lacerated wound of considerable extent on the lower and external part of the left thigh. This wound was almost healed on the thirteenth day, when there occurred a stiffness of the jaws with opisthotonos, pain in the back of the neck, in the region of the trapezias and splenius muscles. Of the following mixture, prescribed one teaspoonful every two hours:—

|                    |         |            |
|--------------------|---------|------------|
| R. Chloroform,     | . . . . | 3ss.       |
| Extr. opii. gum.   | . . . . | gr. i.     |
| Aqua laur. ceras.  | . . . . | 3iii.      |
| Aqua flor. tilisæ, | . . . . | 3xiv.      |
| Syr. Acaciæ,       | . . . . | 3iss. Mix. |

Towards evening, her condition being unchanged, M. Busquet added to the mixture one drachm of Chloroform.

On the second day, the tetanic stiffness of the posterior muscles of the neck and of the jaws was increased; the head bent backwards; pain in the region of the upper dorsal vertebræ; inability to separate the teeth more than the 8th of an inch; deglutition easy; jerking in every part of the body on the least irritation. Prescribed the same dose as the day before.

*Third day.* At four o'clock in the morning, at the time of the spasm, the elevator muscles of the jaws contracted, the tongue was held between the dental arches and it was impossible to return it. Prescribed *inhalation* of chloroform for half an hour; about one drachm of it was used. To his great satisfaction, M. Busquet saw then that the inferior maxilla was depressed: the tongue withdrawn, the patient smiled; speech returned; the head, which had been fixed for two days, moved—indeed the patient complained of no pain, the left leg only continued a little stiff.

During the three following days she continued better; but the left leg remained in the extended position by the contraction of the triceps femoris. Prescribed continuance of the inhalations and doses of chloroform; also a bath during the course of the fourth day.

*Sixth day.* Pleurosthotonos on the left side; pain towards the base of the thorax, with difficult respiration. Prescription: Tepid baths each day until the tenth, whenever the patient was calm enough.

*Tenth day.* The whole left side more and more bent upon itself—it and the left leg forming together, a curved line, with a very decided arch. The child can stir the great toe a little, and very slightly, the flexors of the foot; the left leg in forced abduction, the right rigid; the feet in forced extension. In the evening: The teeth are more closed, deglutition of liquids less easy, abdomen more tender, abdominal parietes harder. At this time there appeared on the left lower extremity an eruption of Herpes circinatus.

From the tenth to the twentieth day, the incidents of the case presented many variations; in short, the rigidity diminished. Prescribed tepid baths, and then vapor-baths. Gradually she got to moving both the diseased limbs.

*Thirty-sixth day.* She can be raised, but complains of cramps.

*Thirty-eighth day.* She walks with a crutch on the left side, and a cane on the right.

*Forty-sixth day.* She walks without either crutch or cane, but the left heel is constantly raised, as in club-foot (*Tulipes equinus*). The limping lasted three months more. Even three years after, this young patient presented a slight deviation of the vertebral column towards the left side."

I will now give the notes on the case of the boy Cornelius, transcribed from our book, and you will perceive how purely empirical the treatment of this disease is; for it is not without authority in the records of Medicine, and may be considered fairly illustrative of the management of such cases by most of the Profession at the present day, though I must confess I would not repeat it, in every particular, did the opportunity offer. I have some doubt as to the utility of the large quantities of quinine given in this case, although he lived too long after it was abandoned, to admit of any suspicion that it had any influence in the unfortunate result. His intemperate habits, worn-out constitution and uncared for course of life generally, I think had more to do in bringing about the fatal result, after he had passed through the acute and most dangerous stage of the disease, than any incident either in the disease or the treatment.

CASE II. Cornelius, a negro man aged 40 years, of very intemperate habits, was employed as a fireman, by the Georgia Rail Road Company. On the 6th of January, 1855, while engaged in coupling two cars, received injuries of the right hand, which made it necessary that the amputation of portions of two of the fingers be performed; the other fingers of that hand were also in a lacerated condition. We performed the operations immediately after the receipt of the injuries, and the wounds on the other fingers were carefully dressed at the same time. The case progressed regularly, without any remarkable incident, the wounds suppurated abundantly, more particularly the fingers which were injured and not amputated, while in the usual time the stumps healed firmly, leaving us the task of dressing only the others. On the 12th February, only twenty-four days after the injury, these wounds had been replaced by the peculiar white cicatrices of the tissues of the negro, and the healing was complete.



During the whole time of treatment, this patient, without doubt, continued to pursue his irregular and intemperate mode of living, for he was subjected, during this time, to less control by his own-ers than at ordinary times.

On the 13th February, he complained of pain and a sense of constriction about the fauces, and also in the pit of the stomach, which circumstance induced us to examine his cicatrices; and while thus engaged, he was attacked with opisthotonos so decidedly and so violently that he fell from the chair upon the floor. He, however, quickly recovered sufficiently to walk the distance of nearly two hundred yards, to his place of abode. The convulsions soon returned violently, and the jerking was incessant. Prescribed quinine 10 grains, every two hours till 60 grains were given; in the intervening hours, portions of an emulsion containing in each dose—

R. Chloroform . . . gttæ. 20  
Tr. Camphor . . . " 15  
Sulphate of Morphia, gr.  $\frac{1}{4}$

A large blister was applied over cervical and dorsal regions, and hot poultices kept constantly to the injured hand. At night, the convulsive movements had been somewhat controuled, and under the influence of the morphine he slept at short intervals.

15th. Convulsions less frequent. Bowels constipated; suffering from retention of urine. Prescription: Emulsion to be continued, the morphine being omitted, and only given on the approach of spasms. Catheterism was applied, and a large quantity of urine evacuated. In this operation, a firm spasmodic stricture at the neck of the bladder was found. Calomel 20 grains, to be followed by oil and turpentine, in the evening. Quinine to be continued as on previous day.

16th. Convulsive movements less violent and less frequent; great rigidity of the muscles about the neck, and also in those of the inferior extremities and back—patient somewhat cheerful notwithstanding. Calomel and oil had produced no evacuation. Prescription: Injections of warm water and salt. We were present during their administration. After the second injection, the rectum and abdominal muscles contracted with such violence as to project the fluid from the bowels to the distance of six feet. This was followed by an ample fæcal evacuation, affording much relief to the patient.

From the 16th to the 20th. Convulsions less frequent than at first. Prescription: Emulsion to be continued.

℞. Quinine, . . . . grs. v.

Carb. Ferri. Precip. " x.

Every three hours during the day. Catheterism twice daily.

From 20th to 25th. Condition of patient much improved—convulsions appearing only at night. Prescription: Omit emulsion, except on approach of convulsion; omit quinine and precipitated carbonate of iron. Prescription: Laudanum, 40 drops, each night at bed-time; oil and turpentine, *pro re nata*, to evacuate the bowels; Brandy, in liberal quantities, frequently during the day. Daily catheterism still necessary.

25th to 27th. Patient able to go to the fire—but the pulse very feeble; he appeared cheerful; convulsions disappeared; he complained of bed-sores. Prescription: Brandy during the day, with laudanum at bed-time. Nourishing diet.

28th. Did not rise from bed—extremely feeble. Prescription: Brandy and nourishment.

29th. On our visit this morning, we are told that Cornelius "died in the night suddenly with a fit." No autopsy.

It is not at all unusual, in our Profession, for reputation to be made and much credit claimed for the management of *unsuccessful* cases;—this, in a certain degree, Gentlemen, we feel inclined to do, in default of better grounds, in the case of the boy Cornelius. I must at least call your attention to the fact, that by the treatment, or haply *in spite* of the treatment, he had been conducted through the most dangerous, viz. the *acute* stage of his disease, and had ceased to have any convulsions whatever: but starting with a constitution worn out with drunkenness, this shattered wreck had to sustain the storm of a fearful and most exhausting disease, and what with bed-sores (you will remember, that the Tetanus came on after he left this institution) and the many evils which, under the most careful management, a protracted case of Tetanus must suffer, it is not surprising that he should have in the end, "died cured."

Among the remedies which appeared to us, to have most power in arresting his disease, we consider that in the early stage, the chloroform was invaluable, while later in the disease, brandy did much to sustain him and keep off the paroxysms.

In the case next presented, you will find that anæsthetic inhalation constitutes a more prominent part of the treatment, perhaps, than in either of the others just read in your hearing. I would call your attention to the mixture used in this case—viz: Chloroform and Sulphuric Æther; and also to the immense quantity of it consumed during the progress of the case, without permanent injury to the patient, although a part of the time—a fact which I perceive has been omitted in the notes—he was often for hours in a profound stupor from its effects.

CASE III.—June 17th, 1855. E. C., a young man, a native of Ireland, aged about 22 years, of sanguine temperament, regular habits, applied at our office for advice. He complained of pain in the region of the fauces, and experienced much difficulty in deglutition on account, as he affirmed, of a stiffness in the muscles concerned in that act. The neck was stiff, and an habitual slight strabismus was much increased, giving him a strange and unusual expression of countenance. Our city, at that period, had been the region of Epidemic southward, marked by exacerbations of a paroxysmal nature, and as, about three weeks previously, this young man had been under our care as a case of the above kind, we naturally concluded he was laboring under the hebdomadal return of his former attack. On examination of the fauces, there was found decided redness, and during the examination he complained of inability to open the mouth freely. Prescription: Application of sinapism to the back of the neck; a gargle of pepper-tea and alum—and 15 grs. of quinine, divided into three doses, to be taken on the following morning, at intervals of two hours.

18th. He came again to the office in the afternoon of this day: said that he had been much relieved of his symptoms during the morning, but was now suffering from a return of all of them in a much enhanced degree. On attempting to examine the throat, we find that the difficulty of opening the mouth is increased, more on account of the pain in throat, than from the rigidity in the muscles of the jaw. There was considerable increase in the pulse both as to volume and number, with other evidences of fever. The bowels were constipated. Prescription:—Blue mass, 20 grs. at bed-time; castor oil, 1½ oz. next morning, and quinine and gargle as on the day previous.

19th and 20th. Symptoms neither increased nor diminished in severity—cathartics had acted slightly.

21st. The patient is still able to apply at the office for advice. He presents great rigidity of the muscles, especially of those about the neck and throat, the strabismus increased to a most remarkable degree and the face presents a truly sardonic expression—he walks with extreme difficulty. After being seated upon a chair, favorable to the light, we attempt to explore the condition of the fauces, but find it impossible for him to open the mouth. Upon placing the hand upon the face with the view of steadying the head during the examination, and turning his face towards the light, we find he is seized with a spasmodic twitching in the muscles of the face, accompanied with a slight jerking of the head backward, upon which, our suspicions, before aroused, that his affection, (notwithstanding its slow progress and the absence of any wound, partook of the nature of tetanus,) became confirmed, and we now insisted upon treatment being pursued under more favorable circumstances, viz: with the patient in bed. Up to this time, he had been able to remain in his store, and in some manner to attend to his sales. Visiting him in the afternoon, we apply cups freely to the nape of the neck and afterwards a blister to the same region. We now subject the patient to a most rigid examination in order to detect any wound to which we may refer the origin of his disease. About the middle of the right leg in front, near the spine of the tibia, we find a narrow scab covering a cicatrix nearly an inch long, the result apparently of a scratch which had entirely healed. Upon inquiry we are informed by the patient that this was caused by a very superficial cut with his razor, which, while upon the dressing-table, had been dislodged, and in falling, the edge had touched this part of the leg. The condition of this very slight wound was such as to give the certain conviction, that it had healed by the first intention, and had certainly never suppurated. It could not be re-opened without actual violence, or the use of an instrument; to this we did not deem it advisable to resort. The opisthotonos now very constant, almost without remission, and attended with great pain along the spinal column and at the pit of the stomach. The rigidity much greater on the right, than on the left side. Laudanum in large doses failing to arrest the convulsive movement, we prescribe the following:

R Of Chloroform, . . . . ʒss.  
 Syrup Gum Arabic, ʒ viiss.

Mix well. Dose, one teaspoonful every two hours.

After repeated doses, this was found to afford but little relief, and in the interval of doses, we administered by inhalation, the following mixture which, with us, has superseded in a great degree, the use of pure chloroform as an anæsthetic during surgical operations, the author of the formula we cannot at this moment recall.\*

R Of Chloroform, . . . . ʒj.  
 Sulphuric Æther, . . ʒ iij.

Quantity applied, two drachms, to be increased or diminished according to the effect produced. During the inhalation, and for 30 or 40 minutes after, the convulsive action was much diminished, and by this means the patient obtained a certain amount of sleep.

22nd. Morning visit.—We find the symptoms but little amended. Opisthotonos almost incessant. After consultation with Dr. H. H. Steiner, of this city, the inhalations were continued and a cathartic of castor oil and turpentine administered. From a general tepid bath at this time, the patient experienced very decided, but temporary relief. The following was also administered—

R Of Extract Belladonnæ, grs. iv.  
 Syrup Gum Acaciæ, ʒ iv.

Dose, one tablespoonful every two hours—to each dose, ten drops of laudanum were added, when the convulsions were not otherwise controlled. —

23rd and 24th. Condition unimproved—treatment continued—repeated enemata followed by free evacuation of the bowels, and the discharge of scybalous matter. Great flatulence and forcible expulsion of wind per anum.

25th. Prof. L. A. Dugas, Dr. H. H. Steiner, and my brother,

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\* In the American edition of Erichsen's Surgery we find the following note:—"See Ranking's Abstract, Nos. 17 and 18, and also the Medical Examiner for Nov., 1853; in which Dr. Betton, of Germantown, Pa., reports a case of Tetanus resulting from a wound of the foot by a nail. A mixture of *chloric* Æther and Chloroform was freely administered, and the patient recovered. Dr. Betton says, 'to the Anæsthetic alone, I attribute his recovery, and its influence appeared almost miraculous. May it not be equally valuable in Hydrophobia?' [Here the mixture was made with *chloric* Æther, while we used *sulphuric*. This is the nearest we can at present lay our hands upon a mixture like the one used in our case.]

Dr. Robert Campbell, in consultation. On examination there is discovered great tenderness in the right iliac and lumbar regions of abdomen, and on pressure here, the spasmodic action in the muscles is much increased. Prescription: blister over this region, and to continue the treatment otherwise, lessening the amount of anæsthetic mixture which the patient now calls for incessantly. The tepid baths were also less freely applied for fear of weakening the patient.

From 25th to July 1st. No improvement: during this time, the patient appeared, once or twice, to be on the point of dissolution from exhaustion, after the more violent attacks of convulsions, which now were invariably general. If any improvement was observed it was in the longer interval between the spasms. The treatment consisted now, mainly, in the inhalation on the approach of the attack with Brandy and Laudanum, at intervals of three or four hours. Nourishment: beef-tea, soups, &c.

July 4th. Convulsions less frequent. The patient, on the approach of the paroxysm, calls for the anæsthetic mixture, and frequently by this means the attack is rendered much less violent or altogether aborted.

I continued to visit my patient, in company with Dr. Steiner and Dr. Robert Campbell, till about the 20th of July; during this long interval, the improvement was very gradual, and towards the latter part of the time, the convulsive movements were confined to the muscles about the neck. The inhalations were resorted to, *pro re nata*. Brandy regularly taken, and laudanum in sedative doses at bed-time of each night. The most nourishing diet was also now recommended. The muscular rigidity continued long after the subsidence of the convulsions, and for months after he was able to go into the street. During the convulsive stage of his disease there was used in the inhalations *over two quarts* of the anæsthetic mixture above referred to, and of brandy and laudanum, an *untold* and untellable amount.

A few words now in relation to the nature of the disease, and I will close these rather desultory remarks *about Tetanus*.

Since the valuable discoveries of Dr. Marshall Hall, Mr. Grainger, and Mr. Newport, in relation to the *reflex function* of the nervous system, it has been a matter of possibility to *reason* about the character of the phenomena presented by a case of Tetanic

Spasms, and the result has been, that in the extreme impressibility of the sentient surface on the one hand, and the extreme motility of the muscular system on the other, we see nothing more than two of the normal endowments of the cerebro-spinal nervous system, in a state of exaggeration or permanent exaltation.

The excito-motory function is, so to speak, a *privilege* granted to the true spinal system which it ever exercises in a subordinate and subsidiary manner, and momentarily subject to the mandates of the Will, which can at any time *call the nerves out of* the exercise of this function, and make them act *directly* under the influence of volition, and then they no longer respond to those external influences and excitants with which they were so lately entirely engaged; but there are conditions of the nervous centres, constituting a part of this excito-motory apparatus, in which they no longer attend to the indications of the will, but act independently of it. Tetanus is just one of these conditions, and Tetanic Spasms are but the automatic movements of this true spinal system, submitted to the sport of mere external influences, and deprived of that safety which is naturally conveyed to it, and to the muscles it governs, by the influence of the will, which Will, may in this relation, be looked upon as the protector and guardian of the whole frame; which, when once its dominion is upset, leaves the muscular system to be racked to pieces, by the uncontrolled excitation of the true spinal system, goaded on by every impression, whether from without or from within.

I hope you will excuse me, gentlemen, if in my ardent desire to impress a doctrine indelibly upon your minds, and in my earnest endeavor to simplify that which is of acknowledged intricacy, I bring into relation things never meant to have relation, and perpetrate in parting with you this evening, what might at first sight appear, truly "a far-fetched" analogy.

The Persian Empire is indeed remote from us, both in time and in space, but with your permission I will place it in juxtaposition with some of the different bearings of the subject under consideration, and perhaps as a mnemonic exercise, if in no other way, it may serve you as a *reminder* in this rather obscure pathway of your studies.

This vast region, now of so little importance in the world's affairs, was once, as you remember, under the dominion of a single king. Stretching away in every direction from the capital, Susa,

it became in time, too unwieldy and too cumbrous for the efficient personal administration of a single monarch; the detail, in particular, had of necessity to be entrusted to provincial governors, called Satraps. These Satraps were allowed ordinarily to rule independently in their subsidiary capacity, and to perform certain acts according to their own will, or as dictated by circumstances; but even in *these* acts, they were amenable to their sovereign, and when his attention was called to them particularly, they were performed in accordance with his supreme will. Now these Satraps would occasionally, in times of excitement from accidental causes, get up rebellions, become independent, and even dethrone the monarch, and it was by a process somewhat similar to this, that this splendid empire fell into anarchy and was finally destroyed.

From what I have heretofore said in relation to the brain, the excitomotory system, and the tetanic phenomena, you are already well prepared to make the application. The human organism is a realm then, over which presides the brain, endowed with volition, judgment, reason and caution; for convenience, certain portions of the nervous system are invested with the excitomotory endowment, by means of which they govern particular regions of this dominion by a kind of vicarious authority, but which is at all times liable to be supplanted, in the normal state, by the more authoritative determinations of the will. An "accidental cause," that is, a wound, in some manner which we cannot explain, destroys this wholesome equilibrium in the nervous powers; a "time of excitement," that is tetanus occurs in which the *true spinal* nervous centres, the Satraps, obtaining the advantage, rebel, and no longer obey the prudent and conservative behests of the will, but urge the muscular system into action independently of it, and under the stimulus of every external impression, however trivial;—a motion of the bed, the slightest noise, a sudden gleam of light, a touch upon any part of the sentient surface, or the mere attempt of the will to re-assert its sway, as in the contraction of a muscle, will initiate a convulsion of the most exhausting character; until volition becomes finally null throughout every part of the muscular system. And thus from day to day, do these alienated nervous centres, now literally brainless functionaries, rack to pieces the distracted human organism—a domain richer than Persia at the acme of her grandeur and once more exquisitely governed than Persia, even in the palmiest days of the mighty Cyrus.



Let us review our cases and see how much of all this, they will be found to illustrate:

You will observe that in all three of our cases, the tetanic state was preceded by a wound; that in Case 3rd, the ordinary stimulus of light produced a fixed contraction in the motor muscles of the eye, causing strabismus, afterwards on turning the face to the light, twitching of the facial muscles occurred, and on touching lightly the cheek, violent jactations in the muscles of the neck ushered in the characteristic opisthotonos; while in Case 2nd, on carefully raising the affected hand to examine the cicatrix, the patient was so violently convulsed that he fell from the chair upon the ground. The presence of the urine causes spasmodic stricture at the neck of the bladder, while in all these instances the authority of this will is ignored, and a universal automatism holds empire over the muscular system. How is this brought about? you ask. The wound *probably* excites, and in some manner, permanently exalts this excitomotory function of the nerves, but in *what* way, we cannot at present safely answer.

As to treatment, I think we may safely say that our cases seem to favor the opinion, that in the early stages of Tetanus, sedatives and revulsives are beneficial, while in the latter stages, stimulants should claim the first place. Chloroform, in heavy doses, will produce, in our opinion, all the sedation we could devise from any one remedy, while in the latter stages, we can still recommend it, but in smaller doses, or in the manner in which it was applied in Case 3rd, viz., in combination with another anæsthetic of a more stimulating character. We have great reliance in this combination.

In regard to revulsives, the idea just now occurs to me, more from a consideration of the nature of the disease, than legitimately from a review of the above cases, that I would not recommend you to apply them as a prominent part of the treatment, for I think they are more calculated to enhance and exalt peripheral excitability without materially improving the condition of the disordered nervous centres. Although we have generally applied them freely, I must confess that I cannot recollect at present, any instance wherein marked benefit has accrued from their use, and sometimes I have seen decided injury follow their application.

There are many other ways of viewing the pathology of this disease, scattered every where throughout the books and through-

out the journals, and also many other modes of treatment. Amputation of the entire part, or a section of the nerve, are both rational, the last especially, and should be *considered*, in every case of the disease; Indian hemp (*canabis indica*) has, it is said, done much in many cases; and Dr. R. B. Todd recommends a long bag of ice to the spine. I would probably use one or all of these remedies in certain cases, but at present, and from the few cases I have had the opportunity of comparing, I would never allow Chloroform or Brandy to be excluded, except under very peculiar circumstances, from the medication.

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ARTICLE VII.

*New Parisian Instrument for Amputation, &c.* By Professor  
A. MEANS, M. D.

The progress in almost every department of human knowledge, which has characterized the last half century, has been signally manifested in the numerous and invaluable contributions made to the Healing Art. Even within the range of one of its branches, the civilized world has been laid under a debt of lasting gratitude to the scientific intelligence of the age, for those wonderful Anæsthetic agents, which so promptly and efficiently obtund the nervous sensibilities of suffering humanity, and prepare it to submit, in utter unconsciousness of pain, to the successful application of the knife, the saw, the ligature, or the forceps.

Chemistry stands pioneer in the progressive movements of the present century. She has already discovered many new elements, produced many new compounds, revealed the existence, and traced the action of mysterious laws, and evolved a host of interesting and astounding facts from the hitherto unexplored treasures of the natural world. Nor can it be that our time-honored and scientific profession, should not share in the wealth of her generous disclosures. Nay, no other profession is likely to reap such large harvests from her toils. Her resources are exhaustless, and will still submit to be largely taxed, in time to come,—to carry out the benevolent purposes of the enlightened physician. And even while this article is under the pen, French mind, ever prurient, penetrating, and active, has, in the ardor of its experimental research, levied upon one of her most common gases, for the per-

formance of a new function, and *carbonic acid* is now employed in the hospitals of Paris, to produce local anæsthesia, in some of the most painful maladies, and with the most gratifying results.

Heretofore, this Binary compound was mainly characterized by its capability to form salts by combination with bases—to extinguish combustion—and when inhaled, to produce spasm of the glottis, asphyxia, and ultimately death. Now, in the Hôpital Clinique, and the Hôpital la Charité, under the direction of such minds as Velpeau, and Nélaton, the most excruciating neuralgia, and spasmodic affections of the bladder, uterus, and other accessible organs, and even the pain of abraded and inflamed surfaces, yield to the soothing effect of a topical bath, supplied by this invisible anæsthetic—the atmospheric air (in the mean time) being wholly excluded, whose oxygen, when present, and allowed to combine with the elements of the tissues, must ever evolve heat and augment the nervous excitability of *exposed* surfaces.

But chemical discoveries, aided by the power of genius, are rapidly advancing the Arts, and appropriating the richest results to meet the utilitarian demands of our enterprising, galloping age. The French surgeons—unless, indeed, they are to find their rivals in the cis-atlantic branch of the confraternity—are scarcely equalled by those of any other nation, in the construction of instruments, and the adaptation of scientific and mechanical appliances, for securing greater ease and safety in the performance of important operations. The most recent projection which has yet met our eye, in surgical dynamics, I beg leave to extract from a letter just received from my son, Dr. T. A. Means, now in Paris, and the practical application of which he witnessed while “attending the service” of Maisonneuve and Chaissagnac. The apparatus and mode of operation seem to find great favor with the leading surgeons of the French school, and whether likely to be generally adopted by English and American surgeons, or not, challenge, at least, their impartial consideration, and a fair trial in suitable cases.

The objects proposed to be accomplished by these new mechanical appliances may be thus enunciated, viz:

1st. To complete amputations without the use of the saw.

2nd. To substitute adhesion by first intention, for the ordinary and more tedious suppurative process.

3d. To prevent hæmorrhage,

4th. To preclude entirely the use of ligatures.

5th. To avoid the occurrence of phlebitis, and

6th. To effect a rapid adhesion, and a perfect cure of the truncated extremity, in about one week's time.

A transverse fracture of the bone or bones of the arm, forearm, thigh or leg, is preferred to a separation by the saw, and obviates the necessity of its use. The limb to be amputated is, therefore, surrounded above and below the point at which the force of leverage is to be felt, by two broad, strong, semi-cylindrical clamps,—each divided lengthwise into halves, and moveable upon a hinge-like arrangement, so as to allow of an easy accommodation to the circumference of the limb. These are gradually and closely screwed on to tightness. From the opposite sides of each clamp, and at an angle of  $90^{\circ}$ , there protrude two short, strong axes, perhaps one inch in length, and some two or three inches, longitudinally apart, to allow the attachment of a strong bifurcated lever, with its forked extremities curved upwards, to fasten the more securely upon the axes referred to. An assistant slips the open lever over one of the clamps, so that the upper part of the fork, when the lever is pressed toward the limb, rests upon two of the above named projections, and the lower, curved ends pass under the other two,—thus allowing the action of strong lever power,—the axes nearest the hand of the operator constituting the fulcrum. When both levers are adjusted, above and below, and pressure uniformly made upon the handles by the surgeon and his assistant, the intermediate portion of bone is readily snapped asunder, and a laceration of the surrounding soft parts entirely prevented. An incision, some four inches below the point of fracture, is now made to the bone, the entire integumentous and muscular tissues separated, and the included four inches of bone drawn out, with the excised extremity. The *Ecraseur* of Chassaignac, a new instrument invented by that distinguished surgeon, is now brought into requisition. Derived from the French verb, "*ecraser*"—"to crush or bruise," it is intended as its name imports, by compressive force, to bring into juxta-position, the interior surfaces of the muscles of the stump, to supply the place of the removed bone, prevent hemorrhage, effect early adhesion, &c. The chain-loop of the *Ecraseur*,—to be described hereafter,—is made to include the soft extremity, and is then gradually tightened by drawing the chain back, along the grooves in the canula, through which it

passes; so as to strangle the vessels;—entirely arresting hæmorrhage, preventing suppuration, and allowing, in due time,—as Chassaignac asserts,—the degeneration of the rugged end of the bone, followed by a rounded, smooth surface and a rapid cure.

The latter instrument is already used extensively, among the Parisian surgeons, and, in accordance with the recognised claims of its inventor, found to effect admirable results, not only in amputations, but in the removal of tumors, whether vascular, steatomatous, or cancerous,—uterine polypi, hæmorrhoids, &c. Indeed, Chassaignac himself, but a few weeks since, fearlessly advocated its use, in ligating the largest arteries, as the femoral, and the carotid, and without the apprehension of after hæmorrhage; and in the presence of his class, tested the practicability of his views, with entire success, by ligating the aorta of an ox.

An article in the December number of the London *Lancet*, announces the use of this latter instrument, and its adoption in the English hospitals, for the removal of tumors, etc., by strangulation, without predicting, however, what may be its future success. Chloroformation generally precedes the extirpation of tumors, piles, etc., by the *Ecraseur*. Its first application in the London hospitals, says the *Lancet*, was “by Mr. Stanley, at St. Bartholomew’s, in July last, who removed a singular looking, horny growth, a warty exudation from an epithelial, chimney-sweeper’s cancer of the scrotum.” “Mr. Lawrence, some days after, removed a very large cellular tumor, weighing nearly a pound and a half, and in size, equal to a small child’s head, from one side of the generative organs of a young woman, aged thirty. Seven minutes served completely to detach it; it was followed by no bleeding—no ligatures, and the parts were brought together by sutures.” In the University College Hospital, Mr. Erichsen is reported, by the *Lancet*, to have operated on the 22nd of October, in the removal of “some piles from a man, under chloroform, which were partly internal, by means of the *Ecraseur* of Chassaignac. The piles were elevated with a pair of hooked forceps, and the chain applied around the tumor, and in the course of five minutes and a quarter, the mass was completely cut off, without being followed by the slightest bleeding whatever.”

The description of this novel compressor and extirpator may be given in the language of the article referred to in the *Lancet*. “The *Ecraseur* consists of a handle, and steel canula within which

are grooves for the passage of a jointed chain, like a chain-saw, but without any teeth, or perhaps more like the chain used in watches, the edge being blunted, but not serrated. From the extremity of the canula, projects a loop, as long as may be required, which is passed around the tumor, and gradually tightened, the handle being moved, once in fifteen seconds, when a little click is heard, and the chain tightened by the drawing into the groove of one of the links. This process continues till all the links are drawn into the canula, and the tumor is cut off."

This slow method of producing strangulation and division of the growth, entirely prevents any hæmorrhage. A contused wound is produced, and the orifices of the vessels are thus closed.

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*New York Pathological Society.* Reported by E. LEE JONES, M.D. Secretary.

From other interesting matter, we select the following cases, illustrating the liabilities of this portion of the alimentary canal, and the serious nature of accidents occurring here.

*Ulceration of Appendix Vermiformis.*—Dr. McCready presented a specimen of ulceration and perforation of the appendix vermiformis, from hardened feces.

On Wednesday, June 4th, he was called to visit a slight, somewhat delicate boy in appearance, though habitually enjoying good health. Two days previous, immediately after dinner, he had eaten a large piece of cocoanut. From that time he had suffered colicky pains in the bowels. He had vomited slightly, and a dose of castor oil had been administered, which had acted freely. He was found with a cool skin, and a tranquil expression of countenance; the tongue clean, the pulse about 100, and without tension. The pain complained of was aggravated at intervals, and was located in the epigastric and right hypochondriac regions. He complained of tenderness on pressure; but when it was made gradually, he bore it well. A dose of calomel and Dover's powder was ordered, to be followed in the morning by a mixture of rhubarb and soda. The medicine operated freely, but without affording relief. Morphine in full doses was now prescribed, and the pain was for a time alleviated, and the pulse reduced in frequency. The pain, however, returned, and the pulse rose to 116. The abdomen was slightly swollen, and the tenderness referred to, in the same region as before, was somewhat increased. He complained that it hurt him to rise, or to turn in bed. This, however, was not constant, since he, on

different occasions, turned and raised himself to a sitting posture, at my request, without complaint. The decubitus was natural, generally on the side; legs were not drawn up; the countenance was natural and the skin soft. He was put on the use of calomel and opium: two grains of the former, with a half grain of the latter, being ordered every three hours. The opium, as is frequently the case, diminished the secretion of urine, and also produced slight retention; the patient passing it but once in twenty-four hours.

On the morning of Sunday, June 8th, Dr. Gurdon Buck saw the child, in consultation. The symptoms had not materially altered; the pulse ranged from 116 to 120, and was soft, and of moderate fulness; the tongue clean; the skin, countenance, and decubitus natural. As the bowels had not been moved for nearly three days, a large enema, with a spoonful of castor oil was ordered, and warm fomentations to the abdomen, which had previously been applied, were continued. On visiting the patient at 1 P. M., his countenance was sunken, and pulse very frequent and scarcely perceptible. The skin was bathed in perspiration, and there was some coldness of the extremities. The pain was gone, and the little patient moved freely in all directions. Soon after the administration of the enema, he had a large watery evacuation, and had passed urine freely. This was followed by vomiting of a quantity of dark, green-looking fluid.

During the afternoon and evening, the vomiting recurred several times; and acute pain in the abdomen was complained of. The child became exceedingly restless, tossing about in bed; the extremities colder; the countenance more livid and sunken, and finally expired at about 3 o'clock on the morning of the 10th.

*Post-mortem examination, 14 hours after death. Abdomen.*—On opening the abdomen, it was found filled with a considerable quantity of sero-purulent fluid. The intestines were universally glued together by soft adhesions, which were readily broken up. In several places where two folds would be adherent, there would be at the place of adhesion a dark brown, circumscribed patch, with a well-defined margin, resembling so closely the appearance of gangrene after strangulated hernia, as to be at first taken for gangrene by Dr. Buck.

The intensity of the inflammation was evidently greatest about the hypogastric region, and raising the intestines from the pelvis, the effused fluid was found there of a darker color, having a brownish tinge. There was, however, no feculent odor.

Amid the mass of large intestine which dipped down into the pelvis, the appendix vermiformis was found intensely inflamed, much enlarged, and having a flattened appearance. It contained a concretion about the size of a swollen white bean. No perforation was noticeable. On being laid open, the mucous membrane of the appendix was intensely inflamed; the inflammation extending to the neighboring large intestine, the follicles of which were enlarged

and prominent. The concretion consisted apparently of a small feculent mass which had formed itself around two or three minute whitish bodies about the size of strawberry seeds. The appendix, with the caput coli, was removed, and after maceration one hour in water, several minute ulcerations were evident; one of which, about the size of a pin's head, had perforated into the abdominal cavity. The other organs were not examined.

*Perforation of the Appendix Vermiformis.*—Dr. Gobrecht gave the particulars of a case of perforation of the appendix vermiformis.

"The patient aged 21, a carpenter engaged in making and setting heavy joist, was muscular, of average height, and had been apparently in good health. He was not originally under my own care, but according to the statement made when he took charge of the case, at 11 o'clock on the night of Sunday, Feb. 10th, the first symptoms occurred at about 5 A. M., on the previous Thursday, consisting of abdominal pain, but no purgation, for which some 'cholera medicine' was taken, but without relief, vomiting supervening at about 11 o'clock. During the day, and on Friday, the symptoms increased in severity, and on Saturday and on Sunday, cups and poultices were applied to the abdomen, and internal remedies were employed, which, however, failed of their purpose; the pain continuing until Sunday noon, when it ceased suddenly and entirely, but the vomiting was unabated. For the first time since the attack the bowels were moved that evening by a clyster, but the passage, which was copious, had no fetid odor.

"At this time, when Dr. G. first saw him, there was no abdominal tenderness, the belly being soft without tympanites, and the patient lying at length in the bed. Voice was good, respiration natural, pulse frequent, cool skin, moist clean tongue; but there was great general exhaustion and constant rejection from the stomach, of a dark liquid like black vomit. He supposed, from the detailed symptoms: 1. That he might have had enteritis resulting in gangrene. 2. Or internal strangulated hernia terminating in gangrene. 3. Or that he might have had peritonitis."

Lime-water and ice internally, and counter-irritants externally, were used to combat the obstinate vomiting, while a stimulating and nutritious diet and stimulating applications to the body and extremities, were prescribed to combat the symptoms of exhaustion. Under this treatment the patient rallied somewhat until the after part of Monday, when the vomiting increased again, and the mind wandered a little.

"On Tuesday morning I found that his physical powers had been slowly failing since the previous evening, and when left perfectly quiet there was some disturbance of intellection, but he returned intelligible answers when addressed. It was evident that death would occur before many hours had elapsed, though not immediately, and being of perfectly clear mind, it was thought best to apprise him of his actual condition, which was done in the gentlest manner



possible. It was found that he had no apprehension of his extreme danger, and his life seemed to have been prolonged by the hope of recovery, for when informed of his real situation he asked anxiously, 'Can you not *try* to do more?' then turned on his side, became restless, and had himself propped up in the bed; his mind wandered, breathing was labored, vision became indistinct; he was insensible to those around, and died at half-past ten o'clock, within a half hour after being informed of his hopeless condition.

"*Autopsy.*—On examination twenty-four hours after death, cadaveric rigidity being complete, extensive peritonitis was discovered. The great omentum was thickened, vascular, and bound firmly to the right iliac region. All the coils of the small intestines adhered. The cul-de-sac between the bladder and rectum, by the agglutination of the sigmoid flexure, small intestine and upper fundus of the bladder, was completely shut off from the general peritoneal cavity, thus forming an abscess lined by very thick false membrane, containing more than a teacupful of purulent fluid. Several small circumscribed collections of purulent fluid formed in a similar manner were found in the vicinity of the ascending colon, which was drawn down and attached to the cæcum and appendix vermiformis so firmly that some force was required to separate them.

"The removal of the colon revealed the appendix, which was quite capacious, perforated at the bottom of a large ulcer, situated at about one-third of its length from its extremity, the portions surrounding the ulcer being gangrenous. Just below the orifice of communication between the appendix and the cæcum, was found impacted, a seed or stone with its exterior much softened, which appeared to be that of a large cherry or small plum.

"At the time of death there seemed to have been no communication between the intestinal and peritoneal cavities; the adhesions of the perforated part to the colon preventing it.

"The stomach contained a fluid similar to that vomited; there was no noticeable lesion of its parietes.

"The mucous coat of the intestines was not involved in the inflammation, and contained, nearly throughout, only mucus colored by bile. The lower portion of the ileum and colon contained fecal matter.

"The bladder was empty.

"The specimen presenting the lesion described, was exhibited by Dr. Gobrecht."

"Several of the Fellows referred to similar cases that had fallen under their observation. Dr. Griscom mentioned one in which the foreign body was a watermelon seed; and Dr. Keating referred to one reported by Dr. Meigs, where a collection of fig seeds in the appendix had occasioned the attack. A case was also reported by Dr. H. Hartshorne, in March, 1851, and another in April, 1845, by Dr. Pepper. In the former, a mass of hardened feces, and in the latter, a grape seed, was the offending body."—*Med. & Surg. Rep.*

*Physiology and Pathology of the Supra-renal Capsules and Bronze Disease of Addison.* By Professor TROUSSEAU. (Translated from the Archives Générales.)

In an important communication, made to the Academy of Medicine at its session on the 26th August, 1856, M. Trousseau adduced some new facts and added some reflections which form a valuable complement to the work already published in the Archives, upon the diseases of the supra-renal capsules. A literal copy of the note is here subjoined.

The supra-renal capsules have been nearly forgotten by anatomists, physiologists and pathologists. The researches of Addison and of Brown-Sequard prove that they merit consideration in respect both of their physiology and pathology. We subjoin the principal facts discovered by M. Brown-Sequard, relative to the physiology of these organs, which were submitted to another learned society :

1st. These capsules are endowed with great sensibility.

2nd. They increase in weight and in volume from birth until adult years ; hence they can no longer be regarded as special organs of embryonic life.

3rd. The extirpation of the two organs as rapidly and as certainly destroys life, as the ablation of the kidneys. M. Brown-Sequard operated on sixty animals of different species and found death supervene after an average interval of eleven and a half hours.

4th. The duration of life, when but one of the organs was extirpated, did not exceed seventeen hours.

5th. In not a single instance could the death be attributed to either hemorrhage or peritonitis, nor to lesion of the kidneys, the liver or other important organ in the vicinity of the capsules.

5th. When the semi-lunar ganglions were accidentally injured in these experiments, the heart's action was accelerated ; but this could not be assumed as the cause of the rapid death of the animals.

7th. After the extirpation of these capsules, there follow with almost perfect constancy an excessive weakness, at first an accelerated respiration, then becoming slow, jerking and irregular ; an acceleration of the heart's action, a depression of the temperature and various nervous phenomena, such as vertigo, convulsions and coma, supervened on the near approach of death.

8th. When but one of these organs was removed, the same symptoms were exhibited, but less rapidly and after an interval of apparent restoration ; when convulsions occurred, they were manifested only on the side of the extirpation, and the animal performed spiral rotations, much as when the middle cerebellar peduncles have been divided, rotating from the injured toward the sound side.

9th. There occurred among the hares of Paris an entozooty or an epizooty, characterized by an inflammation of the supra-renal cap-

sules, which give rise to the same symptoms as the extirpation of these organs.

10th. The blood of the diseased animal, when injected into other hares, produced similar morbid phenomena to those resulting from the ablation or inflammation of these capsules.

11th. Wounds of the spinal cord determine an active hyperæmia of these organs, resulting in an hypertrophy or an acute inflammation, and speedily proving fatal. A fact established by Brown-Sequard in 1851,

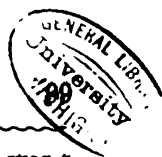
The preceding facts, says Brown-Sequard, lead to the following conclusions, viz:—1st. That the supra-renal capsules are absolutely essential to life. 2nd. That their ablation or morbid change disturbs the economy, either by interrupting the functions of the organs as blood-vascular glands, or by irritating the nervous system and giving rise to convulsions limited to one side of the body.

If these experiments were exact, (of which there can be but little doubt,) or perhaps we should say, if the conclusions deduced by M. Brown-Sequard are legitimate, then the functions of these organs in the animal economy is infinitely more important, than we have previously been led to believe.

Let us now consider their pathology. Some months since, my excellent friend Dr. Laségue published in the *Arch. Gén. de Méd.* a very good abstract of the labors of Addison and other British physicians upon the diseases of the supra-renal capsules. They have established that certain individuals are affected with a peculiar cachexia, with an anemia analogous in many respects, among other anæmias, to that resulting from hæmorrhage, and very unlike that special anæmia known as leucocythemia, (this name is not mine, and God forbid that I should forge a similar one,) a disease in which the blood contains globules analogous to the globules of pus.

In the cachexia described by Addison, the debility experienced was out of all proportion to the lesions that could be discovered; for those lesions, at least those known before the labors of Addison, were insignificant, and simultaneously with the debility a deep, bronze-like coloration of the skin was remarked, particularly on the face, the internal surface of the lips, in the axillæ, on the penice, and many other points; pigmentary matter was deposited under the epidermis and under the epithelium, giving the patient the appearance of a mulatto; the hands and the penice sometimes presented a hue as deep even as that of the negro. Addison moreover proves that the disease is always fatal, and the autopsies performed by himself, as well as several other physicians, furnished invariable evidence of the presence of grave lesions of the supra-renal capsules, viz., cancer, tubercles, fatty degenerations, purulent collections, hypertrophy, &c.

Since these labors have become known in France, two cases of the bronze disease have been observed in the hospitals of Paris, one at St. Louis, by M. Second-Ferréol, the other in my ward at the



Hotel Dieu. The patient that fell under my observation, was a coachman of the Minister of the Interior, aged thirty-seven years, apparently in good condition and well nourished. During the past five or six months his skin has acquired a peculiar and persistent sallow hue. At the same time he grew weaker progressively; he ate little, and had an especial aversion for animal food. He stated that he had lost three-fourths of his weight, which, exaggeration apart, was equivalent to stating that he had been fat and had become lean. The symptoms presented by this man were very striking, and the more so as we recollected the details furnished by the abstract of Laségue, and I diagnosticated a disease of Addison. The patient was soon attacked with a profuse diarrhœa, to the extent of eight or ten dejections in twenty-four hours, yet without the special character of cholera; the body became cold, and he speedily succumbed to the disease. The autopsy revealed no lesion of either the brain, lungs, heart or intestines, that could explain the symptoms or cause of death; the kidneys presented but a slight hypertrophy, and, according to Brown-Sequard, who examined the case, a few tubercular granulations and fibrous filaments, but the supra-renal capsules contained numerous tubercular masses. The apex of one of the lungs contained a very small tubercle, but none in either the bronchial or mesenteric glands. The blood, examined by M. Robin, presented no other alteration, but such as exists in hemorrhagic anæmia.

We here see a man, yet comparatively young, suddenly attacked with a cachectic and cachochymic disease, of which the data furnished by the previous condition of pathology yielded no explanation. We recognized in it the disease of Addison. He died, and the autopsy revealed abundant lesions of the supra-renal capsules, and no other.

The other case of the bronze disease was more carefully observed and reported by M. Second-Ferréol, interne of the hospital. The patient was a waiter and thirty-five years of age. He was addicted to all kinds of excesses, and had contracted a gonorrhœa a year before admission into the hospital. He had previously been admitted into the hospital Necker, and treated for some serious difficulty of the digestive organs; he then presented a deep coloration of the face, which varied in intensity with the condition of the digestive apparatus. He took at that period l'Eau d'Enghien, probably for an incipient pulmonary lesion. Towards the close of the year 1855 he presented himself at the hospital St. Louis with evident signs of tubercle in the apex of the lungs, yet the debility was greater than occurs in phthisis. He left the hospital and returned, and at last died there.

The autopsy, carefully observed by M. Second-Ferréol, revealed very important lesions of the supra-renal capsules; neither cortical nor central substance could be recognized; a fatty mass of an intense yellow color, as if from bile, was alone visible; filamentous tracts

resembling fibro-cartilage traversed the bodies of the capsules. M. Robin found pus globules, but no tubercles in the midst of the fatty mass. M. Ferréol adds that the hands presented the characters of that from the hands of the negro, and that pigment granules were abundant in it.

Let us remark that in the negro race the capsulæ supra-renales are of large size; on the other hand, the accidental development in excess of the pigmentary matter is connected with an augmented size or morbid change of structure of these organs. We might hence infer their connection with the production of pigment in the system.—[*Peninsular Journal of Medicine.*

*Lectures on the Varieties of Continued Fevers and their Discrimination.*

Delivered at St. Thomas's Hospital, by THOMAS B. PEACOCK, M. D., Assistant Physician to St. Thomas's Hospital, etc.

LECTURE.—*General Principles of Treatment.*—It was not my intention in these lectures to have spoken of the treatment of the disease, but as the subject would be incomplete without some allusion to this point, I shall very briefly refer to the general principles which should guide us in our practice.

The first question which arises is, *can we arrest or cut short an attack of fever?* This question must be regarded as a purely practical one, to be decided by experimental investigation. We have sufficient proof that those forms of febrile affection which follow the most definite course—the eruptive fever—may be cut short—as variola;—by vaccination, and, in some cases, by vaccination practiced after the receipt of the variolous contagion; and, though the cases are not precisely analogous, there seems no reason why similar results should not ensue from the employment of remedial agents; and in typhus and typhoid, as well as in other forms of fever.

I. The means by which the arrest of fever has been attempted have been, 1st, Cold affusion; 2ndly, Remedies acting upon the secretions; and, 3rdly, Specific remedies.

1. At the time when Dr. Currie's work had attracted much attention, the plan of employing cold affusion was very much had recourse to in the treatment of all forms of fever—more especially in the early stage—in the hope of arresting the progress of the disease, and there is reason to believe that the remedy was occasionally, at least, successful. The prostration of strength which it occasioned, was, however, sometimes so serious, that the risk more than counterbalanced the advantage, and the practice was abandoned. Cold bathing is still, I believe, used by the hydropathic practitioners as a means of checking the course of fever, but I know not with what result.

2. Remedies which act upon the secretions have been employed for the arrest of fever, under the idea that as the subsidence of some forms of the disease is attended by so-called critical evacuations, such remedies may be the means of eliminating the poison from the system. Thus, as one of the most common symptoms which attends resolution in some forms of fever is profuse sweating, diaphoretics have been exhibited to promote perspiration, and so to bring about resolution. This is, however, an entirely erroneous view. In many cases the occurrence of sweats during fever, especially when only partial, so far from causing the subsidence of the disease, is followed by serious or even fatal prostration of strength. On the other hand, in cases in which the perspirations are most profuse, as in relapsing fever and sometimes in typhoid, the occurrence of the perspiration, so far from eliminating the poison, does not prevent the occurrence of the future paroxysms in the one case, or cut short the progress of the disease in the other. We can, therefore, only regard the occurrence of perspirations in these cases as indications of the resolution of the fever and not as its cause. Again, we sometimes see febrile attacks subside on the occurrence of spontaneous vomiting or purging; but it by no means follows, that the occurrence of these symptoms is the cause of the subsequent resolution; and even were sweating, vomiting or purging proved to be the means by which nature endeavors to eliminate the poison from the system, it would still not follow that it is sound practice for us to imitate.

Of the remedies of this description upon which the most reliance has been placed as useful in arresting fever, emetics occupy the first place. It is quite possible, that, exhibited quite at the commencement of an attack of fever, before the chain of diseased action has been fully established, they may, by exciting powerful reaction, arrest the further progress of the disease. In the employment, however, of these remedies, great caution should be exercised; the more depressing emetics, such as the tartarized antimony and James' Powder, are of very doubtful usefulness, at least in the low forms of fever which we are called upon to treat in this metropolis. They may excite irritability of stomach, which is often a troublesome symptom; as in relapsing fever, and which it may be difficult afterwards to check; or they may cause great depression, if given in cases which are attended with much prostration, as in typhus; or they may excite diarrhoea, if given in typhoid. The objections do not, however, apply to the milder emetics, as ipecacuanha, or, at least, not to the same extent.

In the exhibition of purgatives yet greater caution is needed. In typhoid, diarrhoea is often present from the commencement of the disease, and at all times it is very prone to occur—and active purgatives may excite very undue action; indeed, I have seen them give rise to uncontrollable diarrhoea and so occasion death. During the progress of typhoid it is always necessary to exercise

the greatest caution in the exhibition of aperients; and in cases where the bowels have been confined for several days, and where some interference becomes unavoidable, the action of mild aperients will sometimes prove injurious. In taking into consideration the propriety of having recourse to any of these remedies, with the view of cutting short an attack of fever, it must be borne in mind, that, at the commencement of an attack of fever, when only they could be exhibited with the probability of accomplishing that result, it is impossible to know what will be the character of the disease, and, consequently, to decide as to the special applicability of the remedy to be used.

8. Mercurials were much employed in the treatment of fever a few years ago, under the idea that they might destroy the poison existing in the system or assist its elimination; and also with the view of preventing what was regarded as a complication of the disease,—the inflammation and ulceration of the mucous glands of the intestines. It was even contended, that if the system could be brought under the influence of mercury, the patient always recovered. While, however, there is little doubt that in fever the influence of the mercurial remedies is resisted, there is no proof that, where the system is brought under their influence, they produce any beneficial effect; and practically, their use has been almost abandoned, except for the relief of accidental complications of an inflammatory character.

4. The only remedy which has recently been regarded as possessing any specific power in arresting fever is bark, and especially its alkaloid, quinine. This power has been supposed to be exerted, when quinine is exhibited in large and frequently repeated doses, so as to produce a sedative operation on the nervous system, indicated by well-marked symptoms,—vertigo, headache, tinnitus aurium, and depression of the force and frequency of the heart and arteries. To this condition the term cinchonism has been applied. During the last autumn, I entered into an investigation of the claims of quinine thus exhibited to its asserted power of arresting fever. I found that the reports of the different practitioners, who had made trial of the remedy were so varied that they could not be referred to as affording any satisfactory rule for practice. In our own Hospital, I ascertained that of 35 cases of fever of all kinds treated during two years with quinine, in doses of 8 to 10 and 15 grains, repeated three, four, six, eight, and twelve times daily, the mortality was somewhat greater, and the duration of residence in Hospital of the cases which recovered was very nearly the same, as in the other cases of fever treated by the ordinary means. I further found that, in trying the remedy in large and frequently repeated doses, in particular cases of fever of ascertained character—typhus and typhoid—in some, while the physiological effects were fully manifested, no remedial influence was exerted; in others, the use of the remedy added greatly to the

prostration of strength, and was obviously injurious; and in one only, out of five cases, did it exert any beneficial influence; and in that it operated only in assisting the favorable progress, not, certainly, in arresting the disease. From these facts, I inferred that quinine, thus exhibited, did not possess the asserted power of arresting the progress of fever. An investigation of this kind is one of much difficulty; for it is evident that, if the remedy to be tested be not applied at the commencement of the disease, it is not likely to check the progress of the attack; and, if so applied, as we cannot *a priori* with certainty ascertain the form of disease which is commencing so we cannot decide, if the attack subsides rapidly, whether it has done so in obedience to the natural law of the disease, or as the effect of the remedy employed. We, consequently, are in many instances left in doubt as to whether the remedy has, or has not proved beneficial. It is only by repeated trial and careful observation that we can arrive at a satisfactory conclusion.

Practically, in the treatment of fever, we may dismiss from our minds the endeavor to arrest the progress of the disease, and must be contented to *aim at conducting the cases to a successful issue.*

II. In this endeavor we should be guided by the principles so philosophically laid down by Dr. Allison. We must remember that the different forms of fever are dependent on poisons, which can operate on the system for a certain length of time only, and consequently, that they will terminate favorably, provided the strength of the patient can be upheld for a sufficient length of time, and the occurrence of local applications be averted.

The modes in which death may occur during fever are by coma, apnoea, and asthenia.

1. The most common mode of death in all forms of fever is *coma*. It is that which we have especially to guard against in typhus, where it is caused partly by the presence of the morbid poison in the blood, and partly by the impure condition of the blood, from the imperfect mode in which all the secretions and excretions are performed. It is also a frequent cause of death in typhoid, and in relapsing fever, from the presence of the elements of the bile, or of urea in the blood; and, in all the forms, it may supervene from congestion or inflammation of the brain and its membranes.

2. Death from apnoea is of common occurrence in the acute stages of all the forms of fever, depending either upon diphtheritic inflammation of the fauces, extending into the larynx and trachea; on bronchitis, and especially on capillary bronchitis, or on pneumonia; or lastly, on collapse of the lung, from want of power during the latter stages of the disease. It may also occur from any of these causes, or from pleurisy or pericarditis, during convalescence, and especially is apt to do so in typhoid.

3. Death from asthenia is seen to occur in the simplest form



when it results from inanition, in consequence of the inability to get the patient to swallow the full amount of food required, as in typhus, and especially in prolonged cases of typhoid. The food which is taken may also be rejected by vomiting, as in some cases of typhoid, and especially in relapsing fever; or the patient may be exhausted by profuse diarrhoea, during the course of typhoid especially, but occasionally in typhus; or he may be worn out by long continued diarrhoea, when the discharge is never very profuse, as in the atonic stage of typhoid. Profuse sweating in relapsing fever, or copious discharges of blood from the nose, much more frequently from the bowels, in typhoid or relapsing fever, may occasion the same result. Death from asthenia may also occur from the supervention of acute peritonitis, dependent on perforation of the bowel, in the active stage, or during convalescence from typhoid; or when extensive sloughing occurs on the back, or, as occasionally happens, when the extremities become gangrenous in typhus or typhoid. And lastly, the fatal termination may be caused by sudden syncope, from allowing the patient to sit up in bed or leave the bed, during the active stages of any form of fever, or even at too early a period during convalescence.

Our practice, then, in the treatment of all the various forms of fever, must consist in guarding against their various tendencies to terminate in death; and we must bear in mind, that it is not against one only of these sources of danger that we must be on our guard, but that we consequently have to contend with the several threatening symptoms at the same time, or find them occurring at different periods of the attack.

1. It is essential that *stimulus and support* be exhibited in doses apportioned to the prostration of health, and in the mode best calculated to assure their ready assimilation.

In the early stages of the disease, the patient should only take light and easily digestible food—milk, arrow-root, sago, panada, broth, and soups, or light puddings; with the advancing weakness, the food must be given in a more concentrated form—beef-tea, jelly, chicken-broth, etc.; and at a still later period, or when there is greater prostration of strength, stimulus must be had recourse to; at first, of a milder character, as wine, and subsequently, or when the depression of power is greater, brandy, ammonia, etc. must be given.

It is impossible to lay down any rules as to the quantity of stimulus that may be required. In some cases a few ounces of wine may be sufficient, in others it is impossible to give the support too freely, or in too concentrated a form. I have seen a young lady take, during twenty-four hours, a full bottle of brandy, together with compound tincture of bark and ammonia, etc. And again, I have known a child take a full bottle of wine, with brandy, and other stimulus and support during the same period, and this, too, without producing any symptoms of intoxication, or ac-

completing more than the mere maintenance of life. Indeed, in many cases, the hope of recovery rests entirely upon the continued exhibition of stimulus and support, and these must sometimes be constantly given, at intervals of a very few minutes. It is often, in the low stages of typhus or typhoid, and especially in children, very difficult to get the amount of nourishment which is required to be taken.

The stimulus should be exhibited in conjunction with food, and this should be prepared in the most concentrated form, and be exhibited in the liquid form so as to be readily swallowed and equally readily assimilated. It should be given every hour or half hour, or even every few minutes, and often it can only be exhibited in teaspoonfuls at a time; indeed, I have seen life sustained by the more constant wetting of the lips with wine. The diffusible stimulus should, in cases of this kind, be frequently varied, so as not to satiate the patient; sometimes wine, then brandy, or tincture of bark, or the sesquicarbonate of aromatic spirit of ammonia, in decoction of bark, or with some stimulating infusion, as the serpentaria or senega. Generally, stimulus is required at the earliest period, and in the largest quantity, in the treatment of cases of typhus; but it is often necessary to exhibit it, most freely in the other forms of fever, and especially in children; and while the prostration of strength is of comparatively short duration in typhus, it is in typhoid often very prolonged, and requires the persistent use of stimulants for many days. It is also very necessary after the exacerbation in relapsing fever. In the employment of alcoholic remedies in fever, we must, however, bear in mind that they may occasion the comatose tendency, which it is one of our most important objects to prevent, and we should, therefore, be on our guard against their too liberal exhibition.

2. *Bark and Quinine*.—I have before alluded to the employment of quinine in large doses, with the hope of arresting an attack of fever. When so exhibited, the remedy operates as a sedative; but, in smaller doses, it acts as a tonic, and is often a valuable adjunct to other treatment; but, even when exhibited only in doses of two to four grains, three or four times daily, it is apt to excite headache, restlessness, vertigo, excessive dryness of tongue, and other unpleasant symptoms. Its use therefore requires great caution.

It is often very beneficial in accelerating convalescence when exhibited towards the end of an attack of fever, especially of typhus. It is very useful in cases of typhoid, which, in some localities and in some seasons, have a great tendency to assume a remittent character, having a marked exacerbation each evening, or to relapse. I have also been in the habit of employing it more freely in relapsing fever; but on the usefulness of quinine in this form of fever practical writers are not agreed. Quinine, exhibited in moderate doses, is also very beneficial in a form of typhoid which

is not of uncommon occurrence, where the fever, without being very intense, is very prolonged, and day after day elapses without any material progress towards convalescence. In these cases the use of the remedy is often productive of very striking effects, and greatly accelerates recovery. I am generally in the habit of employing, during the active stages of fever, the infusion, decoction, or tincture of bark, in preference to quinine, believing these remedies to possess, in a greater degree, the tonic properties of the drug—while the quinine seems rather of use as an antiperiodic, and in strengthening the appetite at the end of an attack of fever.

3. *Remedies which have been supposed to exert a specific influence in checking decomposition* have also been employed in the treatment of fever. Of these, that most frequently used has been the chlorate of potash; and it has been much had recourse to since Chomel advocated its use in the typhoid fever of Paris. I have been constantly in the habit of employing the chlorate in all forms of fever in doses of about ten grains dissolved in water, or in decoction of bark, slightly acidulated with hydrochloric acid, in all forms of fever, and with good results; but using it in combination with other active remedies, it is difficult to say what amount of credit is to be assigned to its asserted powers.

4. *Anodynes* are most useful in the treatment of all the various forms of fever. They may be exhibited to calm agitation and procure rest during various stages. Thus it is not very uncommon, in cases otherwise of mild fever, to find the patient wholly incapable of sleep, and thus the disease is kept up; in other cases there is active delirium, the patient being constantly talking, and endeavoring to get out of bed; and, in yet others, there is much tremor, agitation, and nervous excitement. In these cases an anodyne may at once break the chain of diseased action, and dispose the case to advance satisfactorily to convalescence. The exhibition of anodynes in fever requires, however, the greatest care; they may occasion the coma which should most cautiously be avoided, and in some cases, when they do not produce their anodyne effects, they give rise to distressing restlessness, and increase the delirium and excitement which may be present. Generally speaking, they may be exhibited more freely in the early stages of fever than at later periods; and, in typhoid and relapsing fever, more largely than in typhus. In some cases, where there is reason to suspect inflammation or congestion of the brain or its membranes, their use must be preceded by, or combined with, antiphlogistic treatment, cupping, leeches, ice, or blisters. In others, when there is great prostration of strength, they operate most beneficially when combined with diffusible stimulus, as wine, brandy, ether, or ammonia, or can only be safely employed when so combined.

Opiates are also very useful in checking diarrhoea, and they may be more freely applied under such circumstances; they are espe-

cially useful in this way, and also in relieving the abdominal pain, in cases of typhoid; and, when there is any suspicion of a tendency to perforation, they should be freely exhibited; when perforation has already occurred, their use in large doses, offers the only possible means of relief. In the early stages of typhoid, and also during convalescence from that disease, it is a good plan, when there is pain in the abdomen and the bowels are confined, not to exhibit an ordinary aperient; but rather to give a small dose of calomel with a full proportion of opium, and to repeat this in two or three hours, if the pain be not relieved. A small quantity of castor oil may afterwards be given, and the bowels are then generally soon relieved without further inconvenience. I have thus seen attacks threatening perforation of the bowels, readily relieved.

5. *Astringents*.—In cases where there is diarrhoea, or discharge of blood from the bowels, astringents must be employed. For the relief of slight diarrhoea, the milder vegetable astringents, as kino catechu, may be used in conjunction with the compound chalk mixture. In more severe cases, the gallic, and especially the tannic acid, or the acetate of lead with opium, may be used; and these remedies must also be had recourse to in cases of hemorrhage from the alimentary canal, or other mucous membrane.

When the discharge, whether simple diarrhoea or hemorrhagic, takes place from the stomach or bowels, the tannic acid, having stronger local action, is probably the preferable remedy; but in discharges of blood from other organs, the gallic acid, being more readily absorbed, is probably more to be depended upon. I believe, however, in all such cases, that the acetate of lead exercises a much more powerful astringent action than any other remedy.

6. I have already alluded to the employment of *mercurials*, as a means of arresting the progress of fever. These remedies are also exhibited for the relief of the hepatic complications of different forms of fever, more particularly of typhoid and relapsing fevers. When, during the course, or at the commencement, of those diseases, there is more or less jaundice with pain or tenderness in the region of the liver, I have usually had recourse to the employment of the milder mercurials, as the hydrarg. c. cretâ; and as, in such cases, there is also generally diarrhoea, it should usually be combined with astringents and anodynes, as Dover's powder, or the compound chalk powder with opium. This plan I believe to be preferable to the attempt at once to check the diarrhoea by the use of the more powerful astringents.

7. *Remedies employed to check vomiting, etc.*—Ice, hydrocyanic acid, effervescent, soda-water, with brandy, etc., must be had recourse to as circumstances require; and they are especially needed in cases of typhoid, more particularly when assuming the remittent form, and in the various stages of relapsing fever.

8. *Counter-irritants* may be employed for the relief of local com-

plications in all forms of fever, but they are especially useful in the comatose affections of typhus or typhoid, and especially in the latter disease, in children. In such cases the free application of blisters to the neck or to the scalp is of the greatest use. It is not by the discharge that they excite that their application seems to be beneficial, but from their powerfully arousing the patient. I therefore prefer the application of a succession of blisters, to the continuance of the discharge from the same surface. As a general remark, the liq. vesicatorius produces this effect much more decidedly than an ordinary blister, and I have certainly seen the lives of children saved, under the most unfavorable circumstances, by the free application of the blistering liquid to the scalp; nor did I ever know any unpleasant effects result from the practice. Sinapisms applied to the calves of the legs or feet, or hot mustard and salt baths may also be used in cases of cerebral complication, or as the means of arousing the patient when greatly prostrated. The continued use of warm poultices, or turpentine and other fomentations, is of the greatest use in cases of severe abdominal disturbance.

9. *Antiphlogistics* may be employed for the relief of the inflammatory complication of the different forms of fever; but, in modern practice, blood-letting is only practised locally by cupping or leeching. Either of these means may be employed for the relief of symptoms dependent on inflammation of the brain or its membranes; or the patient may be cupped on the chest or between the shoulder-blades in cases of pneumonia or bronchitis; or leeches may be applied on the abdomen, and especially in the right iliac region, in cases of typhoid, where there is pain, and other symptoms of unusually active abdominal inflammation: or on the right hypochondrium in cases of inflammation or active engorgement of the liver, especially in relapsing fever; but in all forms depletion is only applicable in the early stage, and requires the greatest caution. Antimony judiciously exhibited, and in combination with other means, is occasionally useful in the bronchitic or pneumonic complications of the different forms of fever.

10. Lastly, the greatest attention should be paid to the *hygienic management of the patient*. His hair should be cut short or shaved at the commencement of the treatment, according to the urgency of the cerebral symptoms. He should be kept clean; and free ablution of the hands and face, and of the body generally should be frequently practised. Though, indeed, cold affusion has been abandoned in the treatment of fever, ablution is still most usefully employed. Sometimes the patients prefer to be sponged with cold water, at other times with tepid or warm water; and in the latter stages the employment of warm vinegar and water is often very beneficial. Ablution of the whole surface can rarely be borne at the later periods; but the head, face, hands, and feet may usually be sponged, several times in the day, with the greatest advantage,

and often patients obtain great relief in the early stages from keeping their hands in cold or tepid water. The bed and body linen should be frequently changed; and the room should have a free perfiation of air through it, care being taken not to allow the air entering to be too cool or damp, or the patient to be exposed to a direct draught. In making the requisite changes the patient should be disturbed as little as possible; and he should, on no account, be allowed to rise from the bed during the active period of the disease, to make use of the close stool, or for other purpose, or leave his bed at too early a period during convalescence. I have known neglect of these precautions attended with fatal effects, in cases otherwise progressing favorably.

During convalescence also the regulation of the diet is of the greatest importance and especially in typhoid, in which a long period may elapse before the mucous membrane of the bowels recovers its healthy condition. The food should be light, simple, and easy of digestion; and should be taken in small quantities at a time and at frequent intervals. As the appetite returns, the stimulus should be diminished, and replaced by more nutritious food, the liquid should be gradually changed for the solid form, and the intervals allowed to elapse between the meals should be longer. The friends of the patient are apt to transgress in these respects, giving food in too large quantities, too frequently, and of too stimulating a character. This should be carefully avoided. So far from convalescence being accelerated by such a course, it is apt to be protracted; and in typhoid, especially, serious or permanent evil may result. When during convalescence, the exhibition of stimulus materially quickens the pulse or gives rise to flushing, heat, or dryness of the skin, it cannot be beneficial, and should only be given in smaller quantities, or be entirely abstained from.—[*New Orleans Med. News and Hosp. Gaz.*

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*On the Treatment of Chronic Dysentery.* By R. W. ELLIS, Esq.,  
M.R.C.S.E., Bristol.

In consequence of the prevalence of dysentery among our brave troops during the late war, and the generally intractable and often fatal character of the complaint, any new suggestion with reference to the treatment, however insignificant in itself, assumes a degree of interest and importance which otherwise could not be claimed for it. It is under these circumstances that I wish to call attention to a remedy in the chronic form of dysentery which has proved very useful in my hands, but which requires more extended observation to establish its utility than I can expect to have the opportunity of giving to it.

In dysentery, the large intestines are very often the principal parts affected, and in all cases they are very much involved in the

disease. The discharge in the early stage consists of a slimy mucus and of a more serous portion mixed or streaked with blood; subsequently pus is discharged, still streaked with florid blood, epithelial *débris*, &c.; and now and then small portions of imperfectly-formed fæces will be observed with the stool. The calls to stool are frequent and distressing, on account of the tenesmus that accompanies the least evacuation; there is also uneasiness or tenderness in one or both flanks.

Now, when the functions of the colon are performed in a healthy manner, the fæces are figured, of a firm consistence, and of the well known color. In dysentery, or, as it is sometimes called, colitis, this function is completely in abeyance; but whether this is produced by the relaxed state of, and consequent want of tone in, the muscular coat, or from the extreme irritability of the mucous membrane of the intestines, or of the character of its contents, or all combined, I cannot determine. The compound tincture of benzoin I have found, when administered in this disease, particularly useful in restoring, and that in a very short time, this function of the colon. Whether it also acts beneficially by protecting and sheathing the ulcerated portions of the gut, or by its stimulating qualities induces just as it does in chronic ulcers of the surface, the reparative processes to go on more rapidly, I am unable to determine. The tincture of benzoin, I need scarcely say, consists of benzoin, styrax, tolu, a small quantity of aloes, and spirit. The dose generally given is from fifteen to twenty minims. The following cases I have extracted from my note-book, as being the most striking instances that I have met with of its beneficial effects:—

CASE 1.—C. S....., aged fifty, female, married, the mother of several children, has suffered for years from diarrhœa, with tenesmus and discharge of blood per anum; no piles. Has been in the habit of taking drops of the tincture of sesquichloride of iron, as prescribed for her by a physician, and with benefit. Has suffered from her complaint in an aggravated form since last Christmas, and has lately taken a great deal of medicine for it without relief. At present (May 29th, 1855,) she passes a great deal of blood by stool; pain great; bowels loose; blood mixed with the stool; breath short; lips very pale; countenance exsanguine. Ordered twenty drops of compound tincture of benzoin, to be taken on sugar three times a day.

June 1st.—Has not passed any blood since the third dose; feels better; is stronger, and has more appetite; lips rosy; more color in cheeks, and expresses herself as “wonderfully better.”

3rd.—Ordered twenty drops of the tincture of sesquichloride of iron, one ounce of the infusion of columba, to be taken twice a day; one grain of compound calomel pill, every night.

July 24th.—Still continues much better; the pills act gently on the bowels.

CASE. 2.—M. E....., aged thirty, female; ill ever since March

8th, with looseness of the bowels, pain in the left flank, and a discharge of purulent, foetid matter streaked with blood, per anum; emaciated, and has a hectic blush on cheek; skin muddy, and of a dirty yellow tinge; cries, and feels thoroughly miserable with her condition, and disgusts others by the smell which the discharge, which passes involuntarily, gives her; has pikes; has taken nearly all the medicines enumerated by Dr. Copland as useful in such cases, with but little benefit.

May 14th.—Ordered, compound tincture of benzoin, twenty minims, three times a day.

June 8th.—Nearly well; motions natural. To take, tincture of sesquichloride of iron, ten minims; infusion of columba, one ounce, three times a day.

CASE 3.—S. M....., age not ascertained; aborted four weeks previously; after which she suffered very much from hemorrhage. Having attended her for this, and finding her again weak, faintish, complaining of pain and loss of blood, she was treated at first for loss of blood per vaginam, and took some pills of acetate of lead and opium. Two days after, finding her no better, I made a more minute inquiry into her case, and found that the loss took place by the rectum. She was now ordered the tincture of benzoin, and, three days after, I found that the discharge had ceased, and the motion had become quite natural.

CASE 4.—July 28th, 1854. John W....., aged two years; bowels loose; discharge of blood and matter; pain. Ordered, a mustard poultice. Mercury-with-chalk, two grains; compound ipecacuanha powder, one grain, every four hours.

July 30th.—State of bowels not relieved; drowsy; pain severe. Ordered, a warm bath. Mercury-with-chalk, two grains; ipecacuanha powder, half a grain, every three hours.

August 1st.—Much better; no blood by stool; no pain.

7th.—Relapse; considerable pain; powder as last prescribed again tried; also a chalk mixture, with ipecacuanha, etc., but without benefit. Ordered, compound tincture of benzoin, one drachm; tincture of opium, ten drops; peppermint water, three ounces; two small spoonfuls, three times a day.

10th.—Nearly well; felt relief shortly after taking the medicine.

15th.—Cured.—[*London Lancet.*]

*Marriage between Relatives considered as a Cause of Congenital Deafness.* Read before the Academy of Medicine, 29th of April, 1856, by M. MENIERE, Fellow of the Faculty, Physician of the Imperial Institute for the Deaf and Dumb. (Translated from *Gaz. Méd. de Paris.*)

A person is deaf and dumb, is it possible to determine the causes which have produced this fearful calamity? Such is the problem which we would endeavor to solve; but thus stated, and in its vast



extent, it admits of expansion far out of all proportion which the Academy accords to physicians desirous of making known the result of their researches. I shall, then, confine the subject within bounds, by elimination, in order to arrive at the principal causes—at those which have, so to speak, a specific character, and which may become the source of efficacious preventive measures.

Let us take, at hazard, a number of one hundred deaf mutes, from the ages of ten to fifteen; let us select the intelligent, those instructed, and furnished with papers containing positive information on all points of their history; we shall find that two-thirds of these children heard up to a more or less advanced age, and that they belong to the great class of deaf-mutes arising from accidental causes. We need not occupy ourselves with them here, as the reasons which have destroyed their hearing belong to the department of ordinary pathology.

The remaining third—that is to say, deaf-mutes, having never heard, those who may be regarded as affected with congenital deafness, and, as a consequence, with dumbness—are not deaf to the same degree; there are those among them who are accessible to certain sonorous concussions—who perceive some noises, and even sounds. These slight differences do not affect their general condition: they are the deaf and dumb, whom no medical art can cure; at least hitherto, it has not beneficially modified this state of being. But if therapeutics are insufficient, it is not, therefore, necessary to abandon these unfortunate persons; art may intervene efficaciously in seeking to prevent the evil, and it is the attainment of this desirable end that gives such deep interest in the study of the causes of this malady. There, where therapeutics are at fault, hygiene offers remarkable resources; let us, therefore, endeavor to show that congenital absence of hearing belongs more especially to this great division of the art of curing.

When the parents of a child deaf and dumb from birth are carefully interrogated, so as to ascertain the probable causes of this infirmity, we find the same accidents almost always indicated. The vivid impressions felt by the mother during gestation play the prominent part; but if the knowledge of these facts is insisted upon, in order to appreciate their value, their unimportance is soon comprehended, arranged as they are, for the most part afterwards. The human mind easily creates circumstances capable of explaining phenomena; it accepts more readily those which are of a mysterious nature, and it clings to them the more closely the less they are to be explained.

We have no reason to deny, absolutely, that the very vivid impressions experienced during pregnancy may exert an unfavorable influence upon the fœtus; but as nothing in science has demonstrated to us that causes of this kind have a specific action upon the sense of hearing, we shall not allow ourselves to dwell longer on this point of the controversy.

After the moral impressions come the physical accidents, and mothers often invoke them as the cause of the infirmity of the child. Falls, blows acting directly upon the distended uterus, producing the cessation, during a longer or shorter time, of the movements of the infant, may have a direct influence upon it; but in what way can this action be injurious to the ears? Why should deafness be the result? Hitherto, nothing has led to the appreciation of such a fact, therefore we are not authorized to take it into account. Hereditary transmission remains; for we are naturally led to believe that the loss, or rather the absence, of an organ like the ear, is the consequence of a primary congenital state, and it is asked if the parents have not themselves a similar infirmity. During a long time, researches, made with a view of throwing light upon this point of the history of deaf-mutes, have furnished a negative result—that is to say, it has been found that children deaf and dumb from birth were born of parents who had the faculty of hearing. But statistical truths are rarely absolute,—figures have ceased to favor this opinion; new facts, closely observed, demonstrate that deaf-mutes have given birth to children deaf and dumb; but I hasten to add that these few facts only constitute an exception to the rule previously indicated.

Observations, instituted with the greatest care, show that the infant during the intra-uterine life, may be affected with cerebral lesion; those who survive these serious maladies, *hydrocéphales*, *microcéphales*, are ordinarily idiots, or paralytics; in some of them there is a want of hearing, but it is less the ear than the brain which is injured,—intelligence is wanting rather than the sense of hearing, in such a way that it is difficult to establish the diagnosis of deafness. However, facts of this kind, although small in number, have a real importance; they show that, in certain cases, the absence of hearing may be the consequence of an organic disease developed before birth. We may even admit that infants totally deaf upon coming into the world, owe this infirmity to cerebral accidents supervening during the intra-uterine existence, and analogy suffices for this; but in many cases no trace of such lesion exists, consequently there is no sufficient reason for recurring to this supposition.

When a pregnancy has, however, been disturbed by serious accidents,—when the movements of the fœtus, before regular, have suddenly made considerable and unusual variations, or have ceased for a long time, we should be authorized to think that the child had been attacked with some serious evil; and if, after birth, the want of hearing should be promptly proved,—if the head should present some anomalous malformation,—or if nothing analogous should be found,—we might regard deafness as a direct consequence of these accidents; and I know not that the most severe judgment could make any serious objection to this manner of viewing the subject.

In the greater number of cases, those born deaf and dumb can not come under any of the preceding categories. The most careful

and persevering researches fail to find, in any of these causes, materials adequate to legitimize the results. It is necessary, then, to go still farther, to mount yet higher,—to the human organism,—and see if there do not exist circumstances calculated to modify it in such a way that certain morbid conditions should manifest the power of these primary causes.

Invincible arguments exist to support the following proposition: *Man, or rather the human species, deteriorates under certain appreciable conditions.* All the world feels that this is true; the history of all ages and all countries is full of facts, which are of public notoriety; all have seen and known of races of men degenerated, debased,—of families becoming extinct; and science cannot answer, at the present time, the question, to what causes these public and private calamities are to be attributed.

The influence of climate has been more generally cited than any other, because it involves not only the physical, but the moral nature, the diet, and the education, the form of government, and all that constitutes the organization of society.

Let us, however, abandon these speculations, in order to come simply to the statement of certain facts, adequate to furnish legitimate argument; let us examine the statistics of authenticated documents, and find, for, example, what countries in Europe contain the largest number of deaf and dumb. Since the commencement of this century, the greater part of the governments, stimulated by the zeal of some generous souls, and at last by public opinion, have sought out calamities in order to afford relief; they have made an inventory, as it were, in this particular; and, by successive examinations, the number of deaf and dumb in each of the central states of the Old World has been ascertained. Official statements have been published in various works. I have indicated some of the principal results in a book printed more than fifteen years ago, and I may add, that since that period they have not sensibly altered.

One general fact is apparent from those documents,—the number of deaf and dumb vary much in each country; sometimes there are one in every three thousand inhabitants, sometimes one in two thousand, and in certain localities one in two hundred, and even more. These great differences can not be attributed to the inaccuracy of official statements; only want of precision in determining the infirmity can be taken into account. Very often idiots are confounded with the deaf and dumb, but this cause of error is not sufficiently great to vitiate the results of approximate statistics.

If there are countries where there are ten times more deaf and dumb than others, it is impossible not to believe that there exists some local causes capable of producing such a result. Now, these regions so sadly circumstanced are those also which contain the greater number of cretins—those in which the human race manifests the characteristics of the most profound deterioration. Let us endeavor, then, to reach the true source of this public calamity.

The average duration of life is not the same in all the countries of Europe. If it attains thirty-eight and forty years among the most hardy nations, and the best provided with all the necessaries of existence, it falls to thirty and to twenty-eight in countries less favored in this respect. There, also, the greater number of children die in infancy; there, also, youth is less rich in healthy subjects; and among the adults the number of individuals fit for military service diminish in a considerable proportion. Wherever there are many cretins, wherever the children commonly die before the fourth year, wherever the cases of exemption among the conscripts are numerous in consequence of infirmities, it is there also that we can count the largest number of deaf and dumb. It is impossible to avoid establishing a connection between these facts: they are harmonious; they are all the expressions of a like condition—namely, the deterioration of the species, the diminution of the vitality of individuals.

We thus reach the culminating point of this important question: the determination of the general causes which exercise an unfavorable influence upon the human organism. Among these causes is one which plays a prominent part; it is in some measure recognized by all the world; it forms one of those traditional ideas which time consecrates, which certain laws confirm, which everybody accepts, and which, nevertheless, are not clearly enough defined to give rise to official prescription. I speak of marriage between relatives—consanguinity between husband and wife.

It would not be difficult to discover, in the most ancient, literary, or religious records of nations, traces of this idea. Former legislators have given rules for the civil constitution of families, and these ordinances are founded upon the consideration of the evils which result from the union of individuals springing from the same origin. The crossing of races is the natural consequence of these practical views; and it must have entered, gradually, into the intelligence of nations, that to intermarry with strangers was a guaranty of the preservation of the human species. But between these vague beliefs and a law there is a wide difference; and it became necessary to place this rule under the protection of Christianity, in order to insure for it all the development of which it was susceptible.

During a long succession of centuries, marriage was absolutely interdicted between all persons related in any degree whatever; the church alone reserving the right to infringe the rule she herself imposed, in rare instances, the value of which she could appreciate. But these rigorous measures were subject, like many other things, to deplorable relaxations, and at this time all trace of these interdictions has disappeared. If ecclesiastical dispensations are still solicited, it is very well understood that there no longer exist any invalidating circumstances, that civil marriage out of respect for individual liberty is authorized to all degrees of consanguinity, and that, with the single exception of his mother or sister, a man may

marry whom he will. Religious law must follow the civil law—it bestows the consecration necessary to an act already accomplished; and whatever difficulties it opposes to this union, it must ratify what the civil state has permitted. The consequences of this liberty are deplorable—more deplorable than would be believed, for it is easily demonstrated that here is to be found the principal cause for the deterioration of races. Experience has abundantly proved, that in the work of the reproduction of living beings, whatever place in the scale of nature they may occupy, there are useful conditions which favor the result, insure the vitality of the productions, not only for the present, but the future; for the duration of the species is guaranteed in proportion to the perfection of the individual. Do we not know that in agriculture all the vegetables we plant and cultivate are subject to laws based upon centuries of experience? Is it not the same in domestic economy for the reproduction of all animals useful to man, and do we not obey, in these cases, habits which establish the absolute value of the crossing of the races?

We cannot deny the analogy of functions between all living beings. It is not necessary to be a great physiologist in order to comprehend that wheat, hemp, maize, all alimentary and textile plants, etc., deteriorate when their seeds are not renewed, and their distribution varied. The most common experience demonstrates that in the animal races the productions, to be healthy, should be the result of the introduction among the herd of foreign blood. Now, why should it not be the same in the human family? If our pride shrinks from such comparisons, we must, nevertheless, submit to them, for they are necessary, and the title of nobility inscribed upon our foreheads does not destroy the tie of parentage which connects us with the rest of creation. Thus man is subject to the same fatal law which imposes upon all living beings; he can continue in time and space only by the aid of usages which he has in common with all who breathe; and the law of general preservation is for him as for others—the crossing of races, the renewal of the vital agencies.

Those who live in flagrant contradiction to these universal rules will, sooner or later, feel the punishment of their faults, and suffer the disastrous consequences of a practice in opposition to the precepts of experience. Marriage between blood-relations is nowhere of such frequent occurrence as in the localities where are born the greatest number of deaf and dumb. I have before described certain valleys of the canton of Berne, the inhabitants of which, collected in masses, and living almost without any means of communication with neighboring countries, offer all the conditions favorable to these unions between relatives. There, the men marry very young, in order to avoid the troubles and cares of a celibacy without compensation. They marry their cousins, and all the families have been allied for a long time. The children of two brothers, of a brother and of a sister, marry as a matter of expediency, and thus preserve

the inheritance intact ; consequently, the new family is founded in physical conditions than which nothing could be more injurious. It is in the midst of these isolated populations that we find, in all its hideousness, the degradations of the species, the corruption of the race. There reign cretinism, idiocy, and congenital deafness, to such a degree that, the demonstration of the fact I have advanced blazes forth with all its brilliancy. The experiment has been made a long time ; it is practiced among the masses ; the consequences which flow from it are as clear as they are afflicting ; and, finally, it would be to reject all evidence not to recognize in these results the condemnation of such abominable customs.

That marriage between relatives is one cause of the deterioration of the species is certain ; but it may be asked, how can congenital deafness be considered as a proof of the degeneration of the offspring of these unions ? I do not pretend to clear up all these mysteries, only it may be said, as a general rule, that the nervous system, which holds the first rank in the human organization, is also that which suffers the most serious injuries : shortness of stature, slowness and imperfection of development, infancy prolonged far beyond its ordinary limits, as M. le docteur Baillarge has so fully proved, and, finally, obtuseness of the senses, and more particularly feebleness, or even want, of hearing, are the disasters which are to be observed in the brain and its dependencies. It is man reduced to a merely negative condition, manifesting only rudimentary traces of intelligence, a sorrowful object of disgust to all except to the unextinguishable tenderness of maternal instinct.

If we are reproached with coloring too highly the features of this picture,—of attributing to a single cause this degraded organism, while it may be the result of a rare combination of exceptional circumstances,—it would be easy to prove that it is in nothing exaggerated, and that the practice of marriage between blood-relations is the most important of those which can be invoked in such a case. There exists, in truth, families who, living in the midst of luxury and abundance, watched over with the most enlightened care, offer, nevertheless, the sad spectacle of these infirmities of body and mind. These families, instead of seeking a new element adequate to revivify their exhausted organism by making foreign alliances, obstinately persist in contracting marriages with branches issuing from the same trunk, perpetually contract the circle instead of enlarging it, concentrating in these intimate unions the double influence of an origin already debilitated, and suffer the laws of degeneration imposed upon all those who walk in this path of perdition. If, in the confined and isolated localities I have mentioned, a man marries his own cousin,—if the uncle marries his niece, because the scarcity of matrimonial elements renders the thing necessary, other considerations dictate the same practice among those especially who occupy the most elevated stations in the social scale. Royal families, environed by motives of policy, subjected to the exigencies of govern-

ment, or restrained by incentives of a different order,—as the dominant religion of the people over whom they hold sway,—can only select their alliances within a very narrow circle; and thus, in spite of the best-directed care, the royal races become enfeebled under the fatal influence of these intermarriages among themselves. Some of these unions remain absolutely sterile; others produce miserable offspring, destined to premature death; the intellect is weakened, or imbecility reveals itself, and even idiocy pierces through all the privacy of a respected seclusion; and the people, who willingly believe that all the miseries of life are reserved for them, see with secret contentment that the throne is not exempt from the most cruel sorrows, and that all the happy privileges are not the portion of those who are the sovereigns of the world.

The history of all ages contains terrible lessons of this kind; it is not necessary to recall them; whoever will reflect upon this subject will find in his memory many celebrated examples to the support of this argument, and will rest convinced that in marriage there exist natural incompatibilities: and that in transgressing the law of dispersion of races, the lessening and even the destruction of the species is involved.

In stating thus distinctly this precept of public hygiene, we have for an end the prevention of the development of one of the most deplorable infirmities; we would wish to exhaust at its source the cause of these organic deteriorations, whose secret reveals itself to the attentive observer. Pathological anatomy of the nervous system, with whatever care it may be exercised, does not always show the lesion which determines congenital deafness; but, in taking counsel from experience, we may destroy one of the most prolific causes of this organic imperfection, and we may diminish the number of those unfortunates to whom the most enlightened and conscientious medical science has not hitherto been able to afford the slightest relief. We prevent formidable evils, which would be better still than to cure them; and, finally, families would have no longer to deplore the existence of these imperfect creatures who will rise up in judgment against the improvidence of their authors.—[*American Journal of Insanity*.

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*Cases of Tetanus.* Reported by J. G. SEWALL, M.D., Physician to the Northwestern Dispensary.

CASE 1.—*Tetanus (idiopathic)*.—Thomas McAndrew; a native of New York; of Irish parents; aged 10 years. When taken ill, resided at 122 Perry street, in the basement. Owing to the unkind treatment of his step-mother, he was removed to the shanty near 9th avenue. He was often forced to sleep in wet clothes, and turned into the streets at night to find shelter where he could. About

Sunday, September 7th, was seized with what seemed a bad cold; had sore tongue and throat.

September 9.—Tetanic symptoms set in, the muscles of the head and neck first becoming rigid; afterwards those of the shoulders, trunk, and lower extremities. Through the whole course of the disease, the upper extremities were but slightly affected.

Sunday evening, September 14.—First tetanic spasm. Tuesday, 16th, had two. 18th, one; and so on every day one or more.

September 16.—Was first seen by physician. Up to this time had received no treatment save a blister applied to throat within two or three days of the attack. At first it was difficult to decide whether the blistered surface or the disease occasioned the most suffering. General condition was good; pulse 80 to 90, strong; skin natural; is devoid of pain; articulation intelligible though imperfect; muscles of head, neck, and trunk, rigid; head thrown back; bowels constipated; swallows with difficulty; throat slightly inflamed, filled with mucus, giving a rattling sound to respiration.

An ounce and a half of castor oil was ordered, with dressing for blister, and mild liquid diet.

September 15.—Condition the same; bowels freely opened. Ordered tr. assafet. 3i. every three hours, with liniment containing chloroform to spine.

September 20.—The same. Takes beef-tea and broths. Continue same medical treatment.

September 21.—Consultation was held. General condition the same; pulse 88; skin cool; has had several severe paroxysms, with marked opisthotonos; continue assafet. and apply ice to whole course of spine. This was tried for one day without marked effect.

September 22.—An enema of oil of turpentine and castor oil, to relieve constipation. Continue other treatment.

September 23.—Arms somewhat rigid; jaws less movable; surface cool; pulse 90; strength slightly diminished. At this time the violence of the paroxysms were much abated, being limited subsequently to sudden twitchings of the body, brought on by movements or attempts at swallowing, or even unexpected changes in position, or remarks of attendants; occasionally marked by considerable energy, yet always without pain.

September 27.—Pulse 96, intermittent; bowels freely opened. Omit assafet. to take chloroform, fifteen drops every four hours. Considerable mucus rattles through lungs.

September 28.—Slept well; has had no spasms; did not get his medicine; appears and reports better.

September 29.—Pulse 99; three spasms reported since yesterday, P.M.; little sleep; no pain, although constant expression of anguish; tongue coated with thick yellowish fur, cannot be protruded; moves limbs freely; muscles of neck and abdomen rigid; swallows freely. Beef-tea and punch.



September 30.—Pulse 84 ; slept well ; did not get chloroform till to day ; takes two quarts milk per diem by report.

October 4.—Chloroform discontinued, and *tr. cannabis indica*, 20 drops three times a day, ordered. Pulse 96 ; has had three or four dejections after oil ; spasms reported occasionally in night ; appetite good ; improves rapidly.

October 6.—Pulse 84 ; sleeps well after medicine, which he now takes but twice a day. Yesterday, at one o'clock, had a slight spasm with protrusion of tongue ; perspires freely ; gets out of bed now and then.

October 13.—Pulse 92 ; has improved in all points. All medicine has been discontinued for a few days past, and may now be altogether laid aside. Appetite is strong ; muscles much less rigid ; sleeps well and reports very favorably generally.

October 22.—Has been up and dressed for a few days past ; walks about the yard barefoot, and without coat or hat, by holding on to the fences ; muscles of neck and abdomen very much relaxed ; bowels regular ; appetite strong ; sleeps well.

November 1.—Cannot be kept in the house ; moves about rather stiffly, walking on his toes in part ; says he cannot run, yet can climb about with ease. Discharged well.

CASE 2.—*Tetanus (traumatic)*.—Felix McGill ; æt. 35 ; Ireland. First seen, Saturday, October 4.—Eighteen days previously, fell with a scaffold six or eight feet high upon a pile of stones, sustaining an incised wound of the chin and of forehead, the edges of both of which were united by sutures. Both now appear to have kindly healed. Was well and about till yesterday, when he experienced a sense of constriction about fauces, with a stiffness of the lower jaw, and inability to protrude tongue, with a fear that if he did so he might bite it off. Accompanying these symptoms was a severe pain between shoulders. Has had several paroxysms, when mouth was drawn to one side and neck very stiff. These attacks resemble, in part, epilepsy, the patient lying on the floor ; foaming at the mouth ; great rigidity of muscles of neck and face, with strong facial contortions and a drawing of the facial muscles to the left side, the right appearing palsied. One of these lasted ten minutes without loss of consciousness. Tongue partially protruded affected the left side, the right commissure of mouth being shut while the left was raised and in motion. This condition was permanent ; no pain in spine ; sight and hearing both equally good on either side ; mouth cannot be opened above one quarter of an inch ; pulse 60, soft and natural ; face flushed with an anxious expression. Can sit up or walk, though with difficulty.

Blister between shoulders. Cathartic of oil, also *tr. cannabis indica*, gtt. xx. every fourth hour.

October 5.—Much the same ; sleeps after *tr.* ; has had no paroxysms ; oil operated.

October 6.—Was seen by two or three doctors, who used opiate enemata. While one was being administered in evening he suddenly died.

CASE 3.—*Tetanus (traumatic)*.—John McG., æt. 9½.

July 16.—Sustained a slight wound of left foot, between second and third toes, from a rusty nail. Went to school in two or three days after, having suffered no inconvenience beyond a trifling lameness.

Tuesday, August 1.—Complained of soreness of throat, which attracted no attention till Thursday the 3rd, when his mother walked with him to the dispensary, to be treated for it. The physician in attendance noticed, on inspection, an inflammatory blush about the fauces, with some tumefaction, and ordered a stimulating poultice, giving internally spirits mindererus. The boy walked home, and was about the house the rest of the day. Next day, by report, had a high fever, with increase of stiffness and soreness of throat.

August 5.—Found him in bed, tongue hot and dry, countenance anxious, pulse about 90. Complains only of throat, on seeking to examine the tongue, found patient unable to open mouth more than one-fourth inch, through which space its tip was protruded. Thinking the stiffness of the jaw arose from the supposed quinsy, I gently endeavored to depress it, preparatory to the introduction of an instrument, for the inspection of the fauces, when the boy, for the first time, was seized with tetanic convulsions. In lifting him from the bed, the anterior and posterior muscles of the trunk and lower extremities, so counter-balanced each other, that he preserved the stiffness and straightness of a board. Great dyspnœa ensued for a few moments, and the countenance assumed a livid hue, probably from spasm of the glottis. Consciousness was preserved during the convulsions, the boy asking in their midst, that his tongue, caught between his teeth, might be liberated, he being unable to do so for himself. In a few minutes he was returned to bed, the tetanic rigidity continuing, being aggravated, at intervals at from ten to thirty minutes, by strong convulsive movements of various degrees of severity, lasting from one to five minutes, accompanied with severe dyspnœa. Thus he remained during twenty-four hours, without sleep, consciousness, with the power of deglutition and articulation, remaining intact. The only voluntary muscles that appeared to be unaffected were those of the arms, and partially so of the face; no medicine was ordered save a calomel purgative.

August 6.—Continues much the same; no effect from medicine. Compound powder of jalap was ordered. Pulse 92; cannot now protrude tongue at all. While the convulsions seize him, he requires to be raised entirely from the bed. In this act, the body moves upon the feet as a fulcrum being, together with the lower extremities, extremely rigid. Four, P.M.—Free operation from medicine, with relief. Ordered Hoffman's anodyne and tincture hyosciamus in drachm doses, every two to three hours.

August 7.—Much as before ; no sleep as yet, much thirst, and drinks freely, holding the cup himself ; urinates also very freely. Has no pain in wound, which is barely perceptible, nor has had at any time, save when exercised by the convulsive movements. Omitted anodyne of yesterday, ordered tincture cannabis indica, fifteen drops every two hours, terebinthinate liniment to spine, and poultices to abdomen. Four, P.M., slept one and a half hours, the first for more than two days ; rigidity less, can sit propped up at an obtuse angle, lower extremities bend upon knees by his own effort, can open mouth one-fourth inch, paroxysms fewer. Continue cannabis indica every hour, if paroxysms are more often ; beef tea.

August 8.—Has had two or three severe convulsions, rigidity now very marked ; pulse 120 ; mind clear ; no more sleep ; did not get medicine, but three times in night ; continue it, twenty drops every hour ; takes beef-tea freely ; tobacco poultice to abdomen.

August 9.—Has slept perhaps one hour, all told ; paroxysms continue at the intervals, before alluded to ; some last longer, and are more severe ; complains of no pain, save during convulsions, and now and then in right thigh and foot. For two days has had a cramp-like pain, confined to right foot, occurring frequently, and relieved by slight flexion of foot upon the leg ; muscles of face quiet, save in the paroxysms, when they are strongly contorted ; mind clear, talks and swallows freely ; left arm paralyzed, moves right readily, still holding his cup ; is not apt to have a paroxysm directly after swallowing ; which has been noted from the first. Medicine has been very irregularly given ; continue it. Two, P.M., gave chloroform by inhalation, was kept under its influence for five or six hours, during which time he slept ; during sleep relaxation of all the muscles ensued.

Thursday, 10.—Pulse 130, very small ; countenance has expression of great exhaustion ; rigidity as great as before ; body more strongly inclined to left side. Chloroform was omitted after nine last evening, as child refused it ; commenced giving it this morning. When patient was partially narcotized, a frightful convulsion ensued, lasting from five to ten minutes, giving a strong feeling, as if dissolution were impending ; chloroform was discontinued. Father reports that since midnight, he had two or three paroxysms, more severe than the one just alluded to. At two, P.M., patient died, no more paroxysms having ensued. Two minutes before death, he was conversing with his parents.—[*N. Y. Jour. Medicine*.

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*Nitric Acid as a Remedy in Pertussis—with Remarks on its Modus Operandi.* By CHARLES WITSELL, M.D., of Checha, S. C.

Pertussis made its appearance upon Mr. S. C.—'s plantation about the first of June. June 17th, I was requested to visit the place : I found six children quite sick with complicated hooping-cough ; and I learnt that a negress, about a year old, had died in

convulsions the night before I was called. The disease was very violent in its form; the paroxysms of cough were frequent, long, and painful; and of those I had under treatment, one had inflammation of the brain, a second a discharge of pus from the right ear, (which I think was caused by the disease,) and a third, a girl about eight years of age, had a discharge of blood from the nose during each paroxysm of the cough, and was much debilitated. The remaining three were affected with infantile remittent fever.

The children upon the plantation sick with Pertussis, at that time numbered about twenty; and each stage of the disease was present. Alarmed at its violence, I was induced to give Nitric Acid a trial; and I used it as recommended by Dr. McNelly, of Tennessee, sweetened and diluted so as to resemble lemonade; and I directed the nurse to give the patients as much as they would drink.

The disease has passed through the plantation; and of twenty-seven patients only three died: two before I commenced with the Acid, and one after. (An infant was found dead in its bed; and died, I presume, of suffocation.) The patients used Roche's Embrocation from the commencement of the disease; but it continued severe until the Acid was used, when a marked abatement took place in its violence. The patients were also properly nourished. Great attention should be paid to this point in treatment. The diet of the sick should be simple and nutritious: but it is highly important that they should receive nourishment frequently, and in small quantity; for where they are fed but seldom in twenty-four hours, they eat voraciously. A full meal always excites a paroxysm of cough; vomiting follows; they are thus deprived of nourishment; their systems sink for want of nutrition; and they die of inanition. The negro constitution is naturally weak, and if not carefully husbanded, it readily succumbs under disease. Hence the awe with which the approach of Pertussis is viewed by the Southern planter. If the disease visits his plantation in summer, one in four cases usually fall victims to it. It is more fatal in summer, because at that season of the year children, residing in a malarious district, are extremely liable to infantile remittent fever; and when sick with the one disorder, and attacked by the other, they readily sink under the combination.

The next point that I will allude to, is the *modus operandi* of Nitric Acid in Pertussis. It is not without some embarrassment, that I attempt to show the manner in which Nitric Acid is beneficial in whooping-cough, as the pathology of the disease is still debatable, for it is only by ascribing to the disorder an inflammatory disposition, that I can account for the efficacy of the Acid. I have, however, good authority for so doing. Dr. Watt describes the appearances, on examination of several bodies, dead of Pertussis, as distinctly showing an inflammatory affection of the pulmonary mucous membrane; and he goes on to conjecture that

"hooping-cough consists in some eruptive disease of the air cells and bronchi, so minute as to escape ordinary observation, yet so considerable as to excite inflammation." Professor Dickson, in writing of the disease, says: "It is, I conceive, in the first instance, a specific irritation of the bronchi, nervous and spasmodic, but readily becoming phlegmasial." I therefore believe that Nitric Acid owes its efficacy in hooping-cough to an alterative power; for daily observation teaches us that Eutrophics place the system in a condition inimical to inflammation. So well is the fact known, that M M. Trousseau and Pidoux, in giving the definition of an alterative, says: "they are agents that change the character of the blood, render it less adapted for interstitial nutrition, and for furnishing elements for acute or chronic phlegmasia; these take the name of alteratives." The "specific irritation" of Pertussis, caused by the contagion, being prevented by the alterative, Nitric Acid, (by its producing certain changes in the blood,) from passing into inflammation, it soon ceases, and the disease ends. Nitric Acid seems to be peculiarly applicable to Petrussis, in-as-much as, in this disease, we frequently require a tonic influence upon the system; and Nitric Acid is both tonic and alterative.—[*Charleston Medical Journal and Review.*

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## EDITORIAL AND MISCELLANEOUS.

**MEDICAL SOCIETY OF THE STATE OF GEORGIA.**—We do not deem it at all too early, to call the attention of the Profession to the meeting of this Society next April. We most earnestly hope that the Profession will give this cause that consideration which, as Southern men and laborers in the field of a progressive Science, it deserves at their hands. To become a member of the Society, it is only necessary to attend, and apply for membership through some member of the body. Our last meeting at Macon, although rather thinly attended, was a most interesting and improving one to the members of the Society, and there is not one who attended at that time, but will join us in saying, that the enjoyment he derived from his visit to Macon, more than amply repaid the trouble of the journey.

Committees have been appointed to prepare essays upon many important subjects relating to the Science and Practice of Medicine, but voluntary contributions are ever looked for with great eagerness, and receive much attention from the Society. The next meeting will be held in April, at this place (Augusta), and the Profession here extend to their brethren at a distance, a most cordial welcome.

THE NORTH AMERICAN MEDICO-CHIRURGICAL REVIEW.—The first number of this able periodical is before us, and it affords us much pleasure to call the attention of our readers to its valuable pages. In its present garb, the Review may be called a new comer to our sanctum; but in it, we recognize the spirits of two of our valued friends: the Philadelphia Medical Examiner and the Louisville Review recently departed, but now merged into one and embodied in this enlarged form, they come to greet us, and to claim from the Profession, the respect and patronage they so well merited and so long enjoyed in their former individual existence.

The present work is edited by Prof. S. D. Gross, of the Jefferson Medical College, and Prof. T. G. Richardson, of the Medical Department of Pennsylvania College, both gentlemen, too well known to need any endorsement from us. It is published in Philadelphia, by the long established house of J. B. Lippencott & Co. The style and execution of it, well sustain their reputation in their particular department.

We have none other than the most cordial greeting to give this new Bi-monthly Journal, for while as a Review, we think that it will do good service to the Profession; we do not feel that as a competitor, its success can diminish that of works like our own, devoted as we are more particularly to another branch of journalizing, viz., the early promulgation of Medical news for the daily supply of the Profession.

A Review, in our opinion, stands in a somewhat different relation to its readers, than do the other scientific Journals. It is the *selector* of their reading, and the ordeal in which each new production is tried and each new opinion submitted to critical examination, before it is commended to their adoption. At the present day, when books are so multiplied and many of them so voluminous—and on the other hand, when time is so important to the active practitioner, these mentors and condensers are of great value to the Profession, and are becoming daily, more and more useful. The work now under consideration, however, contains several original communications, and will be found interesting in *this* phase as well as in that of a Review.

The *monthly* Journals we regard as a *necessity* to their readers. They supply the practitioner with new principles, new precepts and suggestions, as well as new experiences, at the earliest moment of their bringing-forth, and these serve to guide him and to sustain him in the every-day perplexities of his career, affording to the isolated, nearly all the advantages which would accrue from the frequent intercourse of minds and a diversity of ideas.

In order to carry out this important object efficiently, the entire space must be occupied with practical matter, devoted to the end in view, leaving the fuller criticisms and more extended reviews to works issued at longer intervals and which make this important branch, a principal object of their labors.

Our sixty-four pages, we find barely sufficient to elaborate the monthly accumulation of valuable matter which the daily progress of the science is crowding upon us, and which duty impels us to lay before our readers. We have held it an object very near to our hearts, to keep the Southern Medical and Surgical Journal, as it has ever been, the conservative exponent of sound Medical Doctrine, steering clear, if possible, of any involvement in the many vexatious jarrings which too often destroy the symmetry and dim the glory of periodical literature, both Scientific and Polite; rendering the life of the Editor truly, but a "vanity and vexation of spirit;"—a vanity, because it fritters away, in *small* things and personalities, time and labor which should be earnestly devoted to the high and important objects of his calling; and a vexation, because "grievous words ever stir up anger," and "an angry man stirreth up strife."

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*A Pocket Formulary and Physicians Manual*—Embracing the Art of Combining and Prescribing Medicines to the best advantage; with many valuable Recipes, Tables, etc., adapted to the Profession throughout the United States. By THOMAS S. POWELL, M.D., of Sparta, Ga. Savannah: W. Thorne Williams. 1855. pp. 181.

This truly excellent little work comes to us from a source in which we have great confidence. Dr. T. S. Powell having been long engaged in the Practice of Medicine in the Southern country, knows well how to appreciate the wants and also how to smooth down the rough places for the young practitioner in the same field. The title of his work should have been "The Young Physician's Friend and Pocket Counsellor," for it indeed contains much friendly advice and many suggestions, where impromptu action is necessary, which can with difficulty, be found any where else. The author has labored to make the work efficient and comprehensive, while at the same time, it is not encumbered with a bulk which would render it inconvenient.

The detail of daily intercourse between Physician and patient is well portrayed, and suggestions are made for his guidance under all circumstances; to the old and experienced Practitioner, we know, that these are not necessary, but to the novice, in his first entrance—on his debut in the battle-field of life—these very details, and the manner in which they are performed by him, make up the sum total of his success, and stamp him in the beginning, either as the promising aspirant or the awkward blunderer. There are many things connected with the Practice of Medicine, which require experience in the daily matters of ordinary life; persons *out of* the Profession are more or less familiar with them, and capable of passing judgment upon them; but the recent graduate devoted, up to his entrance into the Profession, either to study or to some solitary occupation, is unfamiliar with these very things, makes a faux pas, and his fate is settled in that

circle. On these points we think Dr. P.'s suggestions are very happy. The work contains also many useful formulæ and prescriptions which will enhance its value to the junior members of the Profession.

Dr. Powell, we think, deserves the thanks of the Profession, and especially in his own State, and we take great pleasure in giving our recommendation to a work which possesses so entirely our approval.

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MEDICAL DEPARTMENT OF THE UNIVERSITY OF LOUISVILLE, KY.—We regret to have to chronicle the burning of this fine edifice. It appears that little has been saved—College building, Library and Museum, all consumed in the devouring element. Loss estimated at over one hundred thousand dollars. The Trustees and Faculty have our sincere sympathy in their severe calamity.

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*Burning of the Medical Department of the University of Louisville.*—The Medical Department of the University of Louisville, including the library, laboratory and museum, was destroyed by fire on the 31st ultimo. The loss is estimated at \$100,000, with insurance for \$50,000. The building in which the "Old Medical School" was held, was donated by the city for this purpose in 1839, and since that time the Trustees and Professors of the Institution have been constantly adding to its usefulness and interest, by appropriations from their personal profits, for books, apparatus and medical curiosities; Professors Silliman, Gross and Flint having each, at different times, visited Europe for the purpose of procuring for the Institution instruments and books. Its library of French works, relating to the various branches of the profession, was, probably, the most complete in the Union. Some books, a few retorts, and jugs of acid, and a desk or two, was all that was saved of the contents of this interesting and useful Institution. In one hour all was destroyed. There were between two and three hundred students attending the lectures.—[*Boston Med. & Surg. J.*]

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We, not without some hesitation, introduce the following from a daily secular journal; but the statements so well corroborate what would be a rational theory in such cases, and at the same time are so suggestive in the treatment of Tetanus from this, and even from other causes, that we lay it before our readers to let them give it what importance they think it deserves. The chloroform, of course, did not act as an *antidote*, in the proper sense of the term, but only served to control tetanic action till the noxious substance was eliminated from the system.

*"Chemical Poisons and their Antidotes.*—The employment of subtle poisons in many remarkable cases of poisoning by intelligent criminals cognizant of their efficacy, has awakened a spirit of dread among the reflective portion of the community—as it is generally believed that science has discovered but few, if any, antidotes to the working of these destructive agents. This is particularly the popular prejudice with respect to strychnine; but we glean from the *Rochester Democrat* a case of a remarkable character, in which a complete recovery from the effects of this deadly poi-



son has been wrought by the application of most simple antidotes. The narration of this case we deem of such general interest as to authorize epitomizing its features.

A policeman having accidentally swallowed a large quantity of strychnine, which he used for dog-killing, at once struck upon the idea of attempting to neutralize its effect, by swallowing an emetic. This operation he twice repeated, before the services of a practising physician were called upon.

When the son of Galen arrived, he found the policeman laboring under severe spasms; his body was bent in the form of an arch, and his teeth were convulsively closed. The physician immediately placed the subject under the influence of chloroform, which appears to have entirely negatived the power of the spasmodic action, and continued the administration of powerful emetics; and thus, at the end of some twenty-four hours, the sufferer was found not only to be relieved of every particle of the poison, but entirely free from the spasms and convulsions which had seized upon him. At the last accounts the man appears to be rapidly recovering, he having retained consciousness during his period of treatment. We have now indisputable authority that chloroform, when correctly administered, acts as an antidote to poison; and the very simplicity of the remedy should place it within the reach, as well as remembrance of every individual."

#### *Substitute for Cod-Liver Oil.*

NEW YORK, Nov. 26, 1856.

To the Editors of the New York Journal of Medicine:

GENTLEMEN:—I wish to direct attention to the oily substance taken from the cavities in the head of the spermaceti whale, known in commerce as the head-matter. In summer, it presents the appearance of oil with a copious white fleecy sediment; but in winter, when chilled, resembles imperfectly frozen ice-cream or beef-drippings. It may be obtained from the manufacturers of sperm candles, and should be used while fresh (in its crude state as landed from ship-board), becoming rancid by long keeping. Ol. ethal would be an appropriate name for this substance as being composed mostly of oils and ethal, the peculiar base of spermaceti. "The spermaceti itself consists of two atoms of margaric acid, one atom of oleic acid, and three atoms of ethal. The ethal is remarkable for its analogy, in composition and properties, to the bodies of the alcohol group."—KANE'S *Chemistry*.

It is preferable to the cod-liver oil, on account of being more agreeable to the taste, leaving a pleasant flavor in the mouth, and also being more nutritive and soothing. It is also less apt to disagree with the stomach, and does not cause offensive eructations. The patient may take it either pure, in coffee, or with bread, boiled rice, potatoes, etc. When required, tr. opii. camph. and syr. ferri iod. may be added.

Yours respectfully,

G. P. CAMMANN.

MESSRS EDITORS,—Will you publish the accompanying card in the *New York Journal of Medicine*, and oblige,

Yours respectfully,

G. P. CAMMANN.

A CARD.—*The Double Self-adjusting Stethoscope*.—Being informed that Dr. Marsh, of Cincinnati, complains of my having infringed the patent of his double stethoscope, I would state that,

1. Dr. Marsh's instrument and mine differ essentially one from the other both in principle and construction.

2. I wholly disclaim any intention of interfering with the rights and interests of Dr. Marsh. I have never received any advantage from the sale of my stethoscope, but presented it free to the profession. Dr. Marsh has remained perfectly quiet for two years from the first appearance of the double self-adjusting stethoscope, and now, when the period has elapsed within which I might have secured myself by patent, if so inclined, his aim and endeavor seem to be not to dispose of his *original patented instrument*, but to avail himself of mine with all its *improvements and adaptation to practical purposes*. Is the Profession, then, prepared, on the *ipse dixit* of Dr. Marsh, to sustain him in the sale of my stethoscope under restrictions, when he has not taken the usual course to establish his legal right so to do. He certainly cannot acquire the moral right to receive the benefit of other men's labors.

3. Dr. Marsh's stethoscope appears to be but a modification of other instruments long known in Europe and now in my possession.

The above statement, including the opinion that my stethoscope is not an infringement of Dr. Marsh's patent, is made under advice of eminent counsel.

G. P. CAMMANN.

New York, Dec. 2, 1856.

[*N.Y. Jour. Med.*]

*Nutrient in Sugar.*—The nutritive properties of sugar are much underrated in this country. As an aliment, Dr. Rush, of Philadelphia, maintains that sugar affords the greatest quantity of nourishment, in a given quantity of matter, of any subject in nature. Horses and cattle were fed wholly on it at St. Domingo for some months, when the exportation of sugar and importation of grain were prevented from want of ships. During the crop time in the West Indies, all appear fat and flourishing. The cattle fed on the cane tops become sleek and in fine condition. The negroes drink freely of the juice, and become fat and healthy. Sir George Staunton observes, that many of the slaves and idle persons in China hide themselves among the canes, and live entirely on them for a time. In that kingdom the emperor compels his body guard to eat a certain quantity of sugar every day, that they may become fat and look portly. Sugar and rice constitute the common food of the people, and every kind of domestic animal is fed on sugar. Plagues, malignant fevers, and disorders of the breast, are unknown in the countries where sugar is abundantly eaten as food. The celebrated Dr. Franklin used to drink syrup every night before he went to bed, to alleviate the agonies of the stone.—*Vir. Med. Jour.*

*Phosphate of Lime in the Treatment of Fractures.*—We notice in a late number of the *Gazette de Hôpitaux* some cases of fracture, in which the union of the bones appeared to be promoted by the administration of the phosphate of lime. In one of these cases, of fracture of the humerus, there was union in forty-five days *without* the phosphate. The patient, a fortnight afterwards, fractured the arm in the same place, by a fall from a horse. The phosphate of lime was then prescribed, and the arm was placed in splints as before; the bones united in *thirty-five* days. The man had the ill-luck to break the callus a third time, and, under the use of the lime, the fracture was consolidated in *twenty-five* days. The remedy in

question has long been employed by M. Piorry in the treatment of rickets, mollities ossium and Pott's disease, but it appears to have been only recently suggested by M. A. Milne Edwards as a useful remedy in cases of fracture. We are surprised that no allusion is made to its employment in ununited fracture; whether it has been tried in these cases which are often so difficult to cure, we do not know; it would seem that it could hardly fail to be of service.—[*Boston Med. Jour.*]

*Iodoform*.—A new preparation of iodine, discovered by Sevilas,<sup>1</sup> and more especially brought to notice by M. M. Dumas and Bouchardat, possesses properties which promise to make it a valuable addition to our means of employing, with benefit, this important therapeutic agent. It presents itself in a solid state, in the form of small pearly particles, of a sulphur-yellow color, friable, soft to the touch, and with a very enduring aromatic odor. It contains more than nine-tenths of its weight of iodine. It is sweet to the taste, and is not corrosive.

It destroys animals in a smaller dose than iodine, after having produced more or less depression, and rarely produces vomiting. This depression is followed by a stage of excitement, convulsions, contractions, etc. Iodoform does not produce the least local irritation, not producing the slightest increase of vascularity of the mucous membrane of the stomach and bowels.

Its therapeutic properties are thus arranged:—1. In consequence of the large quantity of iodine which it contains, it can replace iodine and the iodides in all the cases in which these are indicated. 2. It is absorbed with the greatest facility. 3. It has the advantage over all other preparations of iodine of never causing any local irritation, or any of those accidents which render the suspension of iodine necessary in certain cases. 4. In addition to the properties it enjoys in common with iodine, it has advantages peculiar to itself: it allays pain in certain neuralgic affections, and produces a sort of local and partial anæsthesia of the rectum, when introduced into that organ. 5. It may be given in doses of from five to fifty centigrammes a day. 6. The principal diseases in which it has been employed with advantage are endemic goitre, scrofula, rachitis, syphilis, certain affections of the neck of the bladder, or of the prostate, and certain neuralgic affections. 7. It forms, with the greatest facility, most important pharmaceutical preparations.—[*Arch. Gén. de Méd. New York Jour. of Medicine.*]

*Lobelia in Erysipelas*.—Dr. Livezey recommends the saturated tincture of lobelia as a local application in erysipelas. He applies it by means of fine linen or muslin cloths, saturated and frequently renewed, and believes it will prove more satisfactory than other applications, acting on this inflammation especially, as it does upon the inflammation induced by the rhus toxicodendron, which he considers a similar disease to the other, each alike being capable of being arrested by this local application; the gastro-enteric affection being always attended to, not only in these, but in all affections.—[*Memphis Med. Recorder.*]

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## ORIGINAL AND ECLECTIC.

### ARTICLE VIII.

#### *A Case of Strangulated Ventral Hernia—Recovery after Operation.*

By HENRY F. CAMPBELL, M. D., Professor of Surgical Anatomy, &c., in the Medical College of Georgia.

In the January number of the present volume of the Southern Medical and Surgical Journal, page 8, will be found the report of a case almost exactly similar to the following, except that in the present, the patient was not in the pregnant condition. This last has come under our observation since, and even before the other was issued from the press.

December 30th, 1856. Called to visit Mrs. J. F. J., of Columbia county, twenty miles distant from this city. Mrs. J. is aged about 36 years, the mother of five or six children, the last of them about four years old. Of rather lymphatic temperament, and much inclined to obesity, but of sprightly mind, and most active habits of life. She had ever enjoyed uninterrupted health, requiring the services of the Profession only during her confinements, the last two of which had been natural, but protracted and very laborious. Her appearance indicated even now, a fine constitution and considerable power of endurance.

Her attendants report that she has been distressed by uncontrollable nausea and vomiting for over two days. We find her in a

state of extreme prostration; countenance pale and dejected; skin cool and somewhat clammy; pulse feeble, and about 120 beats per minute. Doctor J. Maddox, the attending physician, reports that on his visit two days previously, he found her vomiting and complaining of pain in the epigastric and umbilical regions; there was also, at that time, as now, obstinate constipation of the bowels. The colic pains were of the most agonizing character, returning at intervals of ten or fifteen minutes, and each time, with an aggravation of the vomiting.

On approaching the patient more closely, to examine the tongue, we perceive the foecal odour very decidedly manifested in the breath and the ejecta, on inspection confirm our opinion in regard to the character of the odour. We now examine the abdomen, which we find very much enlarged, tumid and tympanitic, and in the umbilical region, we find a large tumor, nearly the size of an orange, and somewhat flattened. This tumor, though flattened upon the top, was very tense, and extremely tender to the touch, though the patient, a highly intelligent lady, insisted that none of her present symptoms were to be referred to the condition of the tumor, as she had frequently observed it in this state without experiencing inconvenience of any kind. The history she gave of the tumor was, that it originated during the parturition before her last, about eight years ago, and had remained pretty constantly there, except on lying down, when it invariably subsided, so as *almost* to disappear. Now, it did not. Our examination being ended, we find during the consultation with Dr. Maddox, that the statements of the lady and her attendants in relation to the case are fully corroborated by him. In his early attendance upon the case, not having been made acquainted with the existence of the tumor, he had administered at first mild laxatives, and directed enemata—all the while endeavoring to overcome the distressing nausea and vomiting. Finding these means fail, and suspecting mechanical obstruction of some kind, his inquiries led to the discovery of the tumor, and the probable explanation of the more prominent features of the case.—Diligent taxis having failed, and apprehending the necessity of more serious surgical interference, he suggests further counsel in a manner not to alarm the family.

In the mean time, the patient had been subjected to a general warm bath, without relaxing the constriction; and among the

the laxatives given, were frequent moderate doses of castor oil, most of which was probably rejected by the mouth; the enemata had been repeated very frequently, but, like the other means, without any good result. One or two of the last evacuations were shown us; they consisted of a considerable quantity of glairy mucus tinged with blood, but did not present either the appearance or odour of fœcal matter. Finding that every thing which could offer any hope of relief to the patient had been done, without any abatement of the distress, we determined upon the operation, as a probable necessity, but again try the faithful application of taxis during at least one hour longer. Upon first grasping the tumor, the patient complains of severe pain and great tenderness; but the manipulations, although they did not lessen the tumor, seemed to be attended with an abatement of the soreness. The colic pains continued unabated during the whole time.—Now, fully persuaded of our inability to save the patient without it, we, assisted by Doctor Maddox, performed the operation in the following manner:—

OPERATION.—The patient is placed upon a couch, convenient to an open window, in order to obtain light. The shoulders and hips are somewhat elevated, so as to relax the integuments covering the tumor—these being loose now, are easily separable from the tumor. Pinching up a small quantity of the skin over nearly the centre of the elevation, we pass through it a sharp-pointed bistoury, with the edge turned towards the surface, and thus cut outwards, making an incision in the skin, not more than an inch and a half in length. The upper end of it came within a very short distance of the umbilicus. The superficial fascia, very much loaded with fat and thickened by the long existence of pressure from the tumor, was then divided, layer by layer, upon a grooved director, until the opalescent peritoneal sac was brought into view. This was rubbed between the fingers, to free it from the intestinal contents, and a small opening, not an inch in length, made into the sac to admit the index finger of the right hand. A large mass of lobulated fat and intestine were now distinctly felt, and at the bottom of this mass, by insinuating the finger between certain loops of intestine, a small ring, tightly occluded, could be distinguished, through which the entrail protruded, and to which much of the fatty matter appeared to be attached. Not wishing

to enlarge the openings in skin and peritoneum if we could feel safe in returning the intestine without looking at it, we explored it carefully with the finger, and from its firmness and smoothness, and also from an imperfect view obtained of it through the small opening, we, after consultation, concluded to attempt its reduction—this we found no very difficult matter, even without further use of the knife; for although the constriction was very great and the parts rigid, after once getting the index finger in actual contact with its border, we continued to press gently, but firmly, against it, after the manner recently recommended by Baron Seutin, in reducing herniæ without operation, and it was felt gradually to yield; we then changed the direction of the palmar surface of the finger a little, so as to make it bear upon the constricted neck of the tumor, and by little and little, it began to go back, when, at a certain stage, it suddenly sank away from the finger, affording instantaneous and almost inexpressible relief to the patient.

We then endeavored to explore the condition of the other contents of the sac,—we found them composed of the masses of nodulated fat before described; no longer jammed together by the impacted intestine, they moved freely about in the now ample chamber, and could be brought to the edge of the ring, and some of them, pushed into the abdominal cavity, but they immediately returned, and by other actions, showed plainly that their principal attachments were *outside*. We examined carefully for any other loop of intestine which might be in the sac, but finding none, proceeded to close up the small incision by one stitch, several strips of plaster and a firm wet compress and a bandage. The patient was directed to keep a towel wet in cold water over the whole, in order to subdue inflammatory action. This was faithfully done; *too faithfully*, for ice was kept on, a part of the time, which may have something to do with certain sequelæ to be described in the latter part of this report.

Immediately on the return of the intestine, the patient experienced an urgent desire to evacuate the bowels, but this was not effected for more than an hour after the dressings were completed. There was no anæsthetic used during the operation, as we had no chloroform. The operation, however, was entirely painless, the patient anxiously begging us, "to let her know when she was going to suffer," from the beginning to the very end of the opera-

tion. Prescription: 15 grs. quinine, in 5 gr. powders, for the next day, and the day after.

January 1st, 1857.—The second day after operation, Doctor Maddux writes:

COLUMBIA COUNTY, GA., Jan. 1st, 1857.

*Dear Doctor*—Mrs. J. appears to be doing very well to-day. Wound looks healthy, and adhesion taking place; not much tenderness of abdomen—some flatulence of bowels; tongue a little coated; pulse ninety-one, and a little full. A free evacuation of bowels soon after we left on Tuesday evening—two small ones since—a little nausea, but no vomiting.

Yours, &c.

J. MADDOX.

To Dr. H. F. CAMPBELL, }  
Augusta, Ga. }

January 7th. Requested to visit Mrs. J. Find her in a state of great uneasiness—mostly, however, mental anxiety. We are informed that on the fourth day after the operation a restricted tenderness was observed somewhat to the left side of the incision, and shortly after, the integuments began to be elevated over that locality. Dr. Maddox was sent for, and we are informed by the attendants, (for we have not had the pleasure of meeting Dr. M. since the operation,) that the patient was found suffering the most intense pain, and that after examination, the Doctor lanced the tumor, from which was evacuated a large quantity of pus, affording the patient great relief. At the time of our visit, another of these abscesses had formed, and before we arrived it had become very tense, and then burst, again relieving the patient. The two orifices were now discharging freely, and the evacuated matter consisted of pus in which could be seen a great number of *oil globules*. We were much concerned, to find that the odour of this discharge presented, most decidedly, the *fecal* taint, and also gave the impression to the senses of *decaying* intestines. There is no mistake as to this latter odour. What added much to our uneasiness was, the report from the attendants, that *air* was observed to bubble out with the matter as it came from the orifices. The bowels continued regular.

On a closer examination, we find that the tumor had flattened considerably, and that on pressure upon the abdomen any where within three or four inches of any of the orifices, there issued from



them a large quantity of the oily pus above described, with an occasional shred of cellular tissue. There was no tenderness, except immediately in the neighborhood of the orifices.

The patient had no fever, and her appetite was remarkably good—apart from mental anxiety, she was cheerful. Prescription: Absolute rest in horizontal position, free potations of Port-wine, a nourishing diet, and the continuance of poultices of ground flax-seed over the tumor to facilitate the discharge of matter, as directed the day before by Dr. Maddox.

January 13th—fifteen days after the operation. Notwithstanding the assurances of Dr. M., the friends of our patient became again alarmed; for now the idea of intestinal perforation has occurred to them, and, on failing to obtain Dr. M., we are again called to the case.

We find the patient suffering much from nausea; the bowels are resolutely constipated; but she has not suffered much from colic pain since the day—indeed, since the moment, of the operation. She is free from fever. Pulse somewhat feeble, probably depressed from protracted nausea. The tumor and the orifices looking very well, the latter granulating, but still discharging; the matter is thinner, nearly milky in appearance, presenting many striæ of blood. In the fluid, we observe many *white grains*, and the matter presents, though to a somewhat less degree than before, the fœcal ordour above described. The patient is more emaciated than heretofore, and less cheerful, as she now believes that perforation of the intestine has taken place, and the idea is confirmed by the odour of the discharge, its color, and also by the fact, that in moving the body about, and also on removing the poultices, bubbles of air or *gas* are seen to issue from the orifices.—

We must confess, that we were not without certain apprehensions of a similar nature. On our near approach to the patient, to examine the odour of the breath, instead of the fœcal odour which we dreaded, and which before existed, we found a very strong odour of *chloroform*. On inquiry, we were informed that, during the lancing of the second abscess, *two days previously*, Dr. M. had allowed the patient to inhale chloroform, and that she was then affected with a nausea which had continued ever since. She had taken none of the chloroform since. We cannot explain this long persistence of the odour in the breath; but we are able to say, that the same feature attended a protracted nausea which followed the inhalation of chloro-

form, in a case of abscess of the breast, which occurred in our practice a few days after our visit to Mrs. J.

Being satisfied—upon what theory, we will hereafter explain—that no perforation existed, we advise to continue treatment as on previous visit, supplying the place of the poultices by lint and simple cerate, and washes of sol. chloride of soda. On the administration of an enema, a free evacuation is produced, and the patient experiences much relief. The Port-wine is now more freely allowed, and a generous diet, otherwise, recommended. The patient is also now advised to sit up in a chair during a considerable portion of the day.

January 31st. We hear from our patient to-day, and are much gratified to learn that she is so far improved as to go about the house, and attend to some of her domestic duties without inconvenience.

February 9th. To-day we are informed by Mr. J. L. Coleman, through whose kind perseverance, we were induced to visit the the above case, under very forbidding circumstances, that Mrs. J. has taken a pleasure-walk of over two miles, without experiencing any unpleasant symptom.

REMARKS.—A few points in the above case, we deem worthy of brief reference:—Firstly, notwithstanding the extreme and protracted distress of the patient, she did not once suspect that the tumor had any causal relation to her suffering, and without careful inquiry, its existence would not have been developed. 2ndly. The contents of the tumor were also somewhat unusual—viz: Entero-epiplocele; the intestine being reducible, while the omentum was partly adherent to the edges of the ring, and floating about in the interior of the sac, after the reduction of the intestine, but still irreducible. 3rdly. In the operation, the only unusual point was the small size of the incision necessary to effect the reduction. 4thly. In the after progress of the case, we are inclined to attribute the abundant suppuration, to the destruction or disintegration of the large quantity of fat on the interior of the sac. This loss of adipose matter was probably due, in the first place, to the low vitality of this tissue, causing it to be more readily affected by the pressure than was the intestine, while the ice used, probably added considerably to this result. The fœcal odour of the discharge, which at one time produced the suspicion that perforation had taken place, we

can only account for on the theory, that the long residence, (eight years,) of the intestine in the sac had communicated to the tissues of the part its characteristic odour, and when suppuration took place, the taint continued until it was obliterated by a destruction of these tainted parts. The oil globules, which might have been mistaken for ingested *castor* oil, and also the granular particles, resembling half digested food, were doubtless only the cells of the adipose tissue and their contents, resulting from the breaking up of the fatty portion of the tumor. The bubbles of *air*, issuing from the sac, were, doubtless, drawn into it during the movements of the body, and did not certainly issue from the interior of the intestinal canal—of course there was no perforation. A feature that proves, beyond doubt, that no perforation existed, is the repeated filling up and distention of the sac; for by this, we have evidence that the ring had become impervious, and firmly so, or the pus must inevitably have passed into the abdominal cavity: whereas there was not even the least inflammation of the peritoneum or tenderness.

The fortunate result of this case, and also of the case recently published by us, inclines us strongly to the opinion, that the operation in such cases has been too much a matter of dread, and that inasmuch as *delay* in hernia is ever attended with *danger*, the operation should be more promptly performed than it generally is.

In reference to the universal dread of peritonitis by the Profession, we would humbly suggest, that it has probably originated from the fearful nature of that form of it termed, Puerperal Peritonitis, a disease beginning in a restricted locality, generally about the hypogastric region, and rapidly extending to every portion of the abdomen, and terminating fatally in a few days and sometimes, in a few hours. This rapid extension and this fearful mortality, we think, has become associated in the mind of the Profession, with *all kinds* of peritonitis and *all injuries* of the peritoneum, to an extent which, more dispassionate observation and an unbiassed investigation of the records of Surgery, will prove to be unfounded, or at least very much exaggerated.

## ARTICLE IX.

*Cutaneous Diseases—their Principles of Treatment.* By W. T. GRANT, M. D., of Wrightsboro', Columbia county, Ga.

It may be laid down as an axiom in Medicine, that every morbid condition of the system goes, *pari passu*, through certain phases or conditions,—and each disease, according to its cause. We may illustrate this remark by the disease, Variola, in which we have a gradual change of conditions, from a mere erythematous blush, through papillæ and vesiculæ to the umbilicated pustule. And it is extremely doubtful whether genuine small-pox ever fails to go through these different changes, or ever skips over *any* of these forms. It is the same with every other disease—each one pursuing a definite course, which is in accordance with the cause that originated it.

If this be true, then must the cause, whatever it may be, exercise a controlling influence throughout the disease—beginning with its beginning, and following it through its whole course, guiding and directing. The more proper mode, perhaps, of considering this state of things, would be to look upon the cause as a morbid agent, entering the system, and attacking first one part and then another, and continuing thus until the whole body is sick—as we have it in pneumonia, where the cause indicates its presence first by exciting an irritation in the lungs, next by producing a congestion, next a condition denominated spleenification, and finally hepatization. So, then, we may consider that in every disease, the specific cause or morbid agent exists in the system just as long as the disease continues to increase, and acts as an excitor of the changes that are taking place. And just as soon as that cause ceases to exist in the system, these morbid changes will likewise cease, and the morbid conditions left, called pathology, will then be subjected to the recuperative energies of the system, and be healed, if the vitality is not too far exhausted. Here, then, we must make a distinction between the cause and effect, and we must divide the treatment accordingly. Therefore the treatment must be of a two-fold nature, which is as follows: first, against the morbid agent,—and second, against the morbid condition of parts left after the agent has ceased to operate. And it should be applied in the order in which these are laid down,—we must first assail the

cause or agent, and then heal the pathological lesions; for it would be folly to attempt to heal a wounded finger, without first extracting the nail or splinter which produced the wound. And I may here remark, parenthetically, that herein seems to me to be the difference between physicians—some attempt to cure the lesions while the cause is still in operation, and consequently fail; while others pursue the more rational course of assailing the cause first, and then the lesions.

The above remarks are prefatory to what follows, and serve to introduce the practice which I shall recommend, while at the same time they give the rationale of the treatment.

In the most of the cutaneous diseases, upon the subsidence of the eruption, or during the desquamation, some one of the excretory glands, either begins to act with more energy than during the course of the disease, or has an increase in some one of the constituents of its secretion. I may mention, as instances, the occurrence of diarrhoea during the subsidence of Rubeola, which, if moderate, is generally considered favorable, and if immoderate, should be checked, but not stopped. Also, during the subsidence of Scarlatina, there is an increase of the urea excreted through the kidneys. I will take this last example to illustrate the subject. The urea is here increased: then there must have been more of it in the system during the course of the disease than natural; or to tell the whole truth, there must have been more of its elements in the blood while the disease increased, than there is wont to be naturally. These elements may have been combined—one or more of them—into some new compound, which was the *materies morbi* that acted to keep up the disease; but as soon as the compound was destroyed, and its elements united into urea, they were excreted by the kidneys, and were thus prevented from keeping up any further irritation, in consequence of which, the disease abated. Or another view is, that some one of them may have been induced to assume some allotropic form, by the entrance into the system of the Scarlet-fever poison, and may thus have been the means of keeping up the irritation. Just as it is with the diarrhoea of Measles, and in this way is it beneficial. And just so is it with every other cutaneous disease, as well also as a great many other diseases, not included in that category.

Thus much in regard to the disease and its cause; and now for the treatment. What is the indication? It is evidently to find

some remedy which, when introduced into the system, will combine with, or in some other way neutralize the offending element or elements. Such a remedy will be found among the *organic medicines*, such as camphor, turpentine, opiates, &c. These remedies—the organic medicines—when introduced into the system, are the most of them decomposed into their ultimate elements, which, obedient to their affinities, combine with whatever other element may at the time exist in a free state in the blood. In this connection I may note an item, which is exciting considerable interest in England and France, among the medical world—and that is, that Carbonic Acid is a most excellent local anæsthetic. And I see that they are reasoning about it in this way. If carbonic acid is an anæsthetic, may not the element carbon be the element which produces anæsthesia, when chloroform, ether, and the narcotics are administered? And it is concluded that it is, and that these remedies are therefore decomposed in the system. Three years ago, I arrived at the same conclusion, and I have now an article which I prepared just three years ago to-day, (30th January,) for publication, but without publishing it, upon the “History, Effects, &c., of Chloroform,” in which I took the position that the element carbon was the anæsthetic element, not *only* in chloroform, but also in ether and the narcotics. Another position I assumed, and which I think now was correct, was, that one invariable effect of the existence of free carbon in the blood, was local congestions in vital parts. I cannot stop now to rehearse the various steps by which I arrived at these conclusions. I only note the above to show that the organic medicines are decomposed in the system into their ultimate elements. If further proof is required, I may cite the reader to the fact, that whenever chloroform or ether, or indeed any anæsthetic or narcotic, is administered to any one, there is always an increased secretion of sugar by the liver, and, in consequence, a good deal is excreted through the kidneys, and *may* be detected in the urine. Whence comes this sugar? It arises from the decomposition of the anæsthetics used, and a recombination of its elements into sugar.

I have said enough to convince the sceptical reader that at least some of the organic medicines are decomposed in the system, and, as I believe, all of them.

Now, to return to our subject:—If in the cutaneous and some other diseases, there is an offending element or agent in the sys-

tem, and if, as soon as it is gotten rid of, the disease abates; and if, also, there is an organic compound which can be decomposed into its ultimate elements in the system, is it not reasonable and proper, in view of all the chemical affinities concerned, to expect that the elements of the medicine will combine with, or in some way neutralize the offending agent? I hold that they must and will; and I cannot conceive how it can be otherwise. It may be objected, that the vital force would interfere. I don't believe in the vital force—not a word of it. All the actions of the system are carried on by elements of matter moved and moulded by chemical laws. Life itself is but a perfect aggregation of chemical effects. The operation of the mind is nothing more nor less than the effects of an oxidation of the constituent elements of the brain, and I have frequently thought that, from its origin, it might with propriety be denominated oxide of phosphorus.

The great test for such opinions as the above is experience: try them at the bed-side, and their success is another evidence of their truth. I do not recollect to have seen much among the journals that bear upon this question, but I have noticed some, and it all corresponds well with our conclusions. Several years ago, some Russian physician—I do not recollect the name, as I write from memory—published the result of his experience in the use of Camphor in Erysipelas, and according to the report, he had extraordinary success. A year or two ago, I noticed in some two or three American Journals the successful use of Camphor in cases of Scarlatina. There was published in the "Georgia Blister and Critic," a case of Erysipelas, which was very quickly and entirely relieved by camphor. The case was reported by Dr. W. T. Goldsmith, of Cartersville, Ga.

My own experience is limited, and I cannot therefore draw upon it. One case I may introduce, which, although not cutaneous, will yet serve to illustrate the treatment. It was a case of aphthous sore mouth, in a child seven months old. I find the following account of it in my note-book:—

Dec. 23. Mouth sore, no white curdy matter; lips swollen, keeps them parted. Ordered a wash—peach-tree root, alum and oak bark, boiled.

Dec. 24. Same in other respects as yesterday; sucked a little this morning; quiet. Continue decoction, and quarter grain of calomel three times a day.

Dec. 25. To-day still the same, only that the cheeks are greatly swollen—feel like an incipient or forming abscess—could feel in each a well-defined tumor, extending from the lower edge of each jaw to the lower edge of orbit—result of the aphthæ in the mouth. Continue decoction; discontinue calomel, which had operated, and substitute the following: 1 dr. tinct. camph., 2 oz. aqua. Mix. Ten drops, three times a day.

Dec. 26. Child doing well to-day, according to overseer's report: improving; swelling of cheeks considerably diminished.

Jan. 1. The above child is well and hearty.

The benefit derived from the camphor in this case was, as is at once perceived, prompt and unequivocal. I will state here, that in the majority of those diseases, in which, according to the foregoing principles, the organic medicines may be expected to be of much avail, camphor is the most eligible one of the whole group, from the fact that it does not possess, like all the others, such other strong effects as narcotism, &c. It is simple in its effects, and unobtrusive in its operation. It is therefore preferable to any other. I may now ask, if there is not a mine of wealth to the practitioner, among this class of remedies, whose value was never suspected? I think there is, and that we may find among their number, remedies which will far exceed our utmost expectations, even in some of those diseases which are considered as opprobria to the Profession. I would like to discuss this subject more at large, but the circumstances under which I write preclude the possibility of treating it as I would like. I could add demonstrative facts, which would carry conviction with them, but I cannot do more just now.

I cannot forbear adding the following condensed synopsis of the admirable explanation, offered by the great German chemist, Justus Liebig, of the *modus operandi* of miasms and contagions. It is, in my opinion, a master-piece, and looks so natural, and bears so much truth upon its face, that we are almost obliged per force to subscribe to its truth. It has likewise a very important bearing upon the remarks above.

There is a principle known to chemistry called catalysis, and means an action set up in one body by another, without the last one participating itself in the action which it thus excites simply by the majesty of its presence. Only by being present with another body it stimulates it to enter into some chemical change.



Now, this power, possessed by some bodies, is catalysis. Some compounds which possess this power exert it upon other compounds, in such a way that within certain limits, almost any compound may be thus generated—whilst others exert their catalytic force in such a way as to generate themselves. The former class may be denominated *indifferent* catalytic bodies, and the latter *self-generating*. Of the former class—the indifferent catalytic bodies—the following may be taken as an example: Mix a quantity of muriatic acid with a mixture of hydrocyanic acid and water: The result is, that the muriatic acid, simply by its presence, sets up an action among the elements of the hydrocyanic acid and water, by which they are decomposed, and their elements recombined into two new compounds—formic acid and ammonia. And this is accomplished without the muriatic acid itself undergoing any change.

An example of the second of the above bodies—the self-generating catalytic bodies—is found in the following example: If to a solution of oxalic acid, a quantity of oxamide be added, the oxalic acid, by its presence, sets up an action among the elements of the oxamide and the water, by which they are decomposed, and their elements recombined into oxalic acid and ammonia, the first oxalic acid itself undergoing no change. Here we see it has reproduced itself, and in this way, says Liebig, by adding more oxamide, it may be made to decompose several hundred pounds of oxamide, and one grain of oxalic acid may be made to reproduce itself in unlimited quantity.

Another example is seen in the action of the vegetable ferment yeast. If yeast be added to a solution of sugar, it sets up an action among the elements of the sugar—and if at the same time a quantity of gluten be added, the action going on in the sugar communicates itself to the elements of the gluten, and the gluten is changed into yeast; and thus the yeast reproduces itself. These examples prove the existence of catalysis.

The application of this principle of catalysis to the understanding of the operation of miasms and contagions is now evident. A contagion—that of small-pox, for example—enters the system of a healthy individual, and by its presence alone, causes some element in the blood to undergo a change, which change consists in a conversion of this element into the offending contagious principle or agent. This change continues as long as there is any of the

element in the system which is susceptible of this change. That such a change does take place no one can deny, and I am inclined to think that the element which, in the system, is thus made to alter its nature from an inert compound to a most virulent mass, will be found to belong to that class of compounds which are known to exist in the blood, and which are produced by the decomposition of the tissues, and are endeavoring to make their way out of the body through some of the excretory organs. Professor Draper would call them downward progressing bodies. And herein lies the explanation of the observed fact, that some persons are partially exempt from the ravages of some of these contagious diseases, and others are wholly insusceptible to their influence. It is because they have little or none of this convertible element in their system. Each of the contagious diseases have a contagious element peculiar to itself, the action of which, upon a healthy system, finds its explanation in the above principles. I need say no more, than merely to point to the connection between the existence of such unhealthy elements in the blood, and what has been already said in regard to the treatment of such diseases. The principles I have laid down, let those who are interested, observe.

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## ARTICLE X.

*Case of Puerperal Convulsions.* Reported by C. R. WALTON, M.D.,  
of Augusta, Georgia.

Saturday, Feb. 2nd, 1856. Called in haste to see Miss S—, aged about twenty: taken suddenly ill, with a supposed fainting fit. She was lying prostrate—head thrown back, perfectly unconscious, muscular system relaxed; pulse very slow, and fall; respiration much less frequent than normal; bloated; skin livid and cold; eyes half open and staring, with tremulous lids. Sinapisms were at once applied to the spine and calves of the legs, ammonia held to the nostrils, and spts. camphor rubbed over the face and forehead. Reaction, to some extent, ensued—a quantity of bile and mucus was ejected from the stomach, but the patient continued insensible and motionless; there was no decided stupor, but the inspirations were deep and sighing. Further inquiry into the history of the case revealed the fact, that she had not menstru-

ated for six or seven months: had had morning sickness and frequent headaches, and had complained, just before the present attack, of intense headache, accompanied with dizziness and blindness. Upon examination, her abdomen was found to be considerably enlarged; feet and legs œdematous. Suspecting pregnancy, but unwilling to make an exploration per vaginam, until the urgent symptoms were relieved, a continuance of the remedies was enjoined, while a messenger was sent for Dr. Joseph A. Eve, who had previously been called to this same patient. Previous to the arrival of the Doctor, Miss S—— had had two convulsions, and was just recovering from the second. Chloroform was sent for, and advantage taken of the interval to make a vaginal examination. The condition of the os uteri, and the results of ballottement convinced us that pregnancy existed, and was advanced to nearly the seventh month; the condition of the mammæ verified the diagnosis: they were turgid, the areolæ very dark, and milk was easily pressed from the nipple. The sonorous breathing of the patient, and some mucous râle, obscured the sounds of the foetal heart.

Miss S—— had several convulsions, attended with violent jactitation, before the chloroform was obtained; there seemed to be no lucid interval. The coma was not profound, yet the convulsions were recurring with increased frequency, and their duration was greater. The pulse had now become very frequent and small, varying from 120 to 140 pulsations per minute, and it became a nice point to determine whether bloodletting ought to be practised or not—the convulsions evidently partaking more of the epileptic than of the apoplectic form, although the persistent unconsciousness of the patient indicated some degree of cerebral engorgement.

Several ineffectual attempts at venesection were made, in consequence of the violent jerking of the patient whenever the point of the lancet was applied;—these muscular contractions being altogether the result of reflex action and unattended with any sensation, as Miss S—— subsequently declared. It was about half-past 11 A.M., when the chloroform was procured, the convulsions succeeding each other with fearful rapidity and violence, increasing in duration and the intervals becoming shorter. The effect of this powerful anæsthetic was at once evident, in diminishing the intensity and duration of the fit. While the patient was under the

influence of the chloroform, venesection was easily accomplished, but very little blood flowed from the orifice, and that was thick and dark; this condition of the blood being induced by interrupted respiration, and further, by the substitution of the chloroform vapor, for atmospheric air. About 1 o'clock, we ordered an injection per anum consisting of about a pint of tepid salt water, from which the patient experienced great benefit, the uterus and pelvic viscera being relieved from the pressure of an accumulated mass of feces, and the congestion of the brain removed by revulsion. She had one or two slight convulsions afterwards, which were easily subdued by the chloroform. The vein was now re-opened, about a pint of blood taken, and the following mixture ordered every hour, in tea-spoonful doses, as an arterial and nervous sedative:

|                    |           |
|--------------------|-----------|
| Sulph. Morphine,   | } 1 gr.   |
| Tartar Emetic, aa. |           |
| Water, - - -       | 4 ounces. |

We now left our patient for a time, and about 11 o'clock at night visited her again. Her condition was much improved; pulse regular, about 80 pulsations per minute; skin moist and soft; breathing nearly natural. After 2 o'clock there were no more symptoms of convulsions, and consciousness gradually returned; but it was not until Monday morning that her senses were completely restored. Labor pains came on regularly, and she was easily and naturally delivered of a living child on Wednesday evening—no ill consequences resulting from the act of parturition, either to mother or offspring, although the latter was evidently premature, and died within a fortnight after its birth.

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#### ARTICLE XL

*Treatment of Neuralgia.* By L. A. HILL, of Antioch, York District, South Carolina.

MESSERS. EDITORS:—An article appeared in the January number for 1846, (page 54.) of your excellent Journal, in which Dr. Blakiston's method of treatment for uncomplicated Sciatica is given, and which has been attended with considerable benefit; and the writer also mentions that some other forms of Neuralgia had been treated with some success in the same manner.

Dr. Blakiston first saw it adopted in Paris, in 1833. It consists in removing the cuticle, by placing "a blister, about the size of a crown-piece, over the chief seat of pain, which is usually the flattened part of the buttock. After it has drawn, and the cuticle has been thoroughly removed, the raw surface is sprinkled with a powder, consisting of, generally, about one grain of acetate of morphia, and a little white sugar. This dressing is repeated for six successive days, the surface of the blister being kept in a raw state, if required, by cantharides, or savine cerate, or else by Albuspeyeres' plaster. This suffices for a very mild case; but in severe cases, of long standing, the pain will now be found to have left its original seat, and to have seized on the knee of the affected side. The same treatment is then applied to the ham; and after six dressings, the pain will have generally disappeared, and the patient will rapidly recover."

Not long after the article—of which the above is an extract—appeared, I had an opportunity of witnessing the good effects of morphia, applied endermically, in Neuralgia of the Scalp.

Mrs. M. W., æt. 57, was attacked, on two successive days, with a sudden sharp pain, near the mastoid portion of the temporal bone, extending chiefly in the direction of the occipital protuberance, but it could be distinctly felt down the side of the neck also. The pain, however, did not continue long, and did not excite much uneasiness, until on the third day, when she was attacked violently—the pain continuing for several hours. Upon examination, I soon came to the conclusion that the pain complained of originated in the nerves, and entertaining some doubts in regard to its cause, I determined to try the effects of morphia, as above directed for Sciatica. I accordingly placed a small blister below, and a little posterior to, the mastoid process, and directed it to be dressed for six successive days, with near a grain of the sulphate of morphia, and a little refined sugar, well pulverized. At the time, I did not have the acetate, and substituted for it, the sulphate. After the fourth dressing, the surface of the blister became dry, and the patient refused having it kept raw, saying, that the pain was entirely removed. There was no other remedy used, and there has been no recurrence of the disease since.

The next case of Neuralgia that I met with, was in July, 1856. Mrs. J. H., æt. near one hundred years—much emaciated, and enfeebled, by age and suffering—had been laboring under the fearful

malady termed *Tic-douloureux*. Several physicians, of acknowledged skill, had failed in effecting more than giving the patient mere temporary relief. The sufferings (giving the patient's own expression) were indescribable; she could not take any nourishment, not even a sup of water, without suffering the most acute pain.

I placed a small blister immediately below the zygomatic region of the cheek, and directed it to be dressed—after the cuticle had been thoroughly removed—with the acetate of morphia, as directed by Dr. B. for Sciatica. After the fifth dressing the surface became rather dry, and it was allowed to heal up. The five dressings, however, were altogether satisfactory, although some remains of the disease could still be felt occasionally.

The patient could now eat and drink, with impunity, and said (using her own expression again) she could “only feel a slight tingling sensation, occasionally,” and expressed her gratitude, for being enabled to entertain the hope, that she would not suffer any more from that disease. Unfortunately, however, about this time she received a *slight scratch* on the back of the hand, which began to inflame, and was soon developed into a phagadenic ulcer, and before it was arrested, the sloughing was so extensive as to produce a severe shock to the system, which it was never able to overcome. The process of healing was extremely slow, and before the wound, caused by the sloughing, was finally healed, the powers of life gave way. The patient died near five months after the application of the morphia; but without a recurrence of the neuralgic pain, except in a very slight degree.

The above cases, of themselves, are by no means sufficient to establish the practice therein recommended, but it is hoped that they, in addition to those already on record, may induce others to try the same method, and give to the Profession their results. We would recommend the practice, particularly, in cases which had undergone the ordinary plans of treatment, without being cured.

Now, it may so happen, that the cause of the disease is obvious, and the treatment plain; as was in a case that came under my notice a short time ago, in which the extraction of a carious tooth, completed a cure—but sometimes the cause is very obscure; it may depend upon some source of irritation in the spinal chord, or in the brain itself; or it may depend upon some irritation along

the trunk of the nerve, that is distributed to the parts where the pain is felt. If, then, the preparations of morphia are sufficient to *benumb* the sensibility of the nerves so completely, it will surely prove a blessing to those who have fallen victims to the cruel malady.

I have observed no bad effects attending the administration of morphia, as above directed; it is but right, however, to mention, that an extraordinary thrilling is sometimes felt over the whole body, particularly at the extremities, with great nausea, and a tendency to faint in particular idiosyncracies.

*On the Tubular Treatment of Strictures of the Urethra and other Mucous Canals.* By THOMAS WAKLEY, Esq., F.R.C.S., Surgeon to the Royal Free Hospital. (Read before the Medical Society of London, Nov. 22, 1856.)

Five years have now elapsed since I had the honor of introducing to the notice of this Society a set of newly designed instruments for the Treatment of Strictures of the Urethra. The justly acquired celebrity of this Association for the encouragement given by it to the authors and promoters of all improvements in the science of medicine, emboldened me to take that step. The new instruments, therefore, and the novel system of treatment which they were intended to establish, were brought under the consideration of the profession through the influential medium of the Medical Society of London. To that circumstance I attribute, in great measure, the attention that the subject at once received from practitioners of distinction and acknowledged standing and ability. The modes of treatment practised at that time were all more or less unsatisfactory; much diversity of opinion prevailed respecting them, and frequently all were tried without any permanent beneficial results being obtained. The forcible and frequent introduction of bougies and caustics into a delicate and sensitive canal, and the division of the implicated structures by cutting instruments, whether used internally or externally, appeared to me to be violent modes of proceeding, which might be entirely supplanted by an operation of a mild description, that approximated more closely to a scientific application of the mechanical means placed at our disposal. All surgeons of any experience had witnessed the failure of the systems of treatment ordinarily pursued. Besides, it must be confessed that it was not failure alone that was to be regretted; but tedious, protracted confinement, and sometimes even fatal catastrophes had to be deplored. The difficulties, annoyances

oes, and disappointments, which seemed to be frequently the most inevitable attendants of the measures adopted in the treatment of stricture, pointed significantly to the establishment of another system—to one that should place the obstructed canal more completely under the control of the surgeon—to one that would afford prompt and at the same time permanent relief, and without destroying in the slightest degree any of the natural tissues at or near to the parts implicated.

It was under the influence of these views and impressions that a plan of treatment was devised, which, after the first introduction of the smallest possible instrument into the bladder, secured to the operator the perfect command of the disordered canal, and thenceforth enabled the surgeon to introduce dilating tubes at pleasure, without the risk or the possibility of *making* or even *entering* a false passage in the urinary canal. Such were the hopes and anticipations entertained, when Mr. Williams, of the firm of Weiss and Co., kindly undertook to construct for me a set of instruments on the principle of those now placed before you, and he is but too well acquainted with the trouble and anxiety which the new undertaking occasioned; but, happily, success—the most agreeable of all rewards—has crowned our efforts.

At first, the expectations that were entertained were only supported by theory. The utility of these instruments now rests on that rock whereon is sustained all that is valuable in our profession—namely, experience. Since the instruments were first introduced to the notice of this Society, hundreds of sets of them have found their way into public institutions and private practice, and I have the best authority for stating that they have been distributed throughout numerous parts of the globe.

Objections to their employment were necessarily anticipated, but certainly not the extraordinary one that they would give the surgeon *too* much power over the disease which his skill is called upon to remove. A similar objection, without doubt, might be urged against almost every useful instrument employed in surgery. The possession of power is undoubtedly requisite in order to accomplish the object contemplated, but a proper exercise of the judgment of the surgeon is necessary for the due performance of all operations that he may undertake. These instruments have been used by surgeons of great eminence and ability, who have spoken of them in terms of high commendation. I may mention in this place the names of Guthrie, Keate, Fergusson, Crampton, Liddell, Solly, Coulson, and Lizars. Since the tubular treatment of stricture was first introduced to the notice of the profession, it has been adopted in hundreds of cases under my own observation, with almost invariable benefit, even where difficult complications existed, such as lesion of the urethra, from whatever causes produced, urinary fistula, false passages, and vesical calculi, and without, I believe, a single fatal event. The results of the tubular



treatment of stricture have been so satisfactory that it would be a dereliction of duty not to endeavor to draw attention to what these instruments have already accomplished, with a view to their more extended operation and general adoption.

The instruments are composed of three guides of different sizes, eleven dilating silver tubes, and the same number of flexible tubes. The guides are numbered 1, 3, and 5.

A guide consists of a hollow silver director, thirteen inches in length, straight, excepting near the end, which is slightly curved, the extremity being closed and rounded, and having an aperture at one side. A moveable handle is fitted to it, for assisting its introduction into the bladder; when this has been effected the handle is removed, and a steel rod of the same size, five inches in length, is fixed into the external extremity of the director by one turn of a screw. This now forms the urethral director, over which the tubes are made to pass.

The silver tubes are nine inches in length, and straight; the opening at the vesical extremity being bevelled off and exactly adjusted to the surface of the guides. The upper end terminates in two flanges, for being worked with the fingers and thumb.

The flexible tubes are manufactured of gum-elastic, lined with flexible metal, and are ten and a half inches long, conical towards their points. Like the silver tubes, they glide over the guide with the greatest precision. Their upper end is furnished with a silver collar and rings, to enable their being secured in the urethra. Both the flexible and the silver tubes are numbered, and work upon their corresponding guides.

It is my object, however, on this occasion, to refer not only to what has already been accomplished in treating strictures of the urethra on the tubular plan, but also to urge that the same principles of mechanism may be beneficially applied to the treatment of strictures of other mucous canals, as the rectum and œsophagus, for the dilatation of the neck of the uterus, and also for the introduction of a large-sized O'Beirne's tube. The various mucous canals of the body are very similar in their structure, and are liable to similar diseases, especially contractions, resulting, in many instances, from like causes. Indeed, the term "Diseases of the Mucous Canals of the Body" appears very naturally to include a set of maladies analogous in kind. The instruments usually employed in the treatment of stricture of the urethra resemble in principle and form the bougies used for stricture of the rectum, and also those for stricture of the œsophagus. The object to be attained in all cases is the same—viz., the dilatation of the canal to its normal calibre. In addition to the new instruments for dilating the urethra, others formed on the same principle for dilation of the rectum, the œsophagus, and the uterine neck are now upon the table, and their mode of action will be shown to you by their manufacturer, who is present.

It forms no part of my intention at this time to enter into any discussion on the relative merits of different and rival plans of treatment, and I disavow any desire of detracting from the scientific efforts of other surgeons who employ other systems, and who adopt other methods advocated by once eminent surgical practitioners, who have passed from the scene of our labors.

Probably it may be stated with confidence, that in forty-nine cases of stricture of the urethra out of fifty, in which any instrument can be passed into the urethra, the application of cutting instruments, or of caustics, or any other means interfering with the normal structures of the urinary canal, might be entirely avoided by the tubular system of treatment.

That the mode now recommended is consistent with the anatomy and pathology of the structures involved cannot be questioned; and the advantage of effecting a cure without causing any breaches of healthy textures is equally free from dispute. The infliction of wounds even trivial in extent, in persons having depraved or debilitated constitutions, is often attended with great danger, and is not unfrequently followed by the worst results.

The mechanical power which the guide and tubes place at the disposal of the surgeon is unquestionable. It is absurd, however, to pretend that any resemblance exists between that power and the forcible catheterism of M. Boyer, as has been stated. The difference of action in the two cases being taken into account, a striking *contrast*, instead of the smallest resemblance, will be rendered obvious. In the French system, the catheter is forcibly directed towards the bladder, without any guiding implement whatever, the surgeon relying simply on his knowledge of anatomy. The tubular dilators, on the contrary, are passed over a guide, and can not by any possible means diverge from the natural course of the canal,—an advantage peculiar to this system of treatment; and it would be difficult to overrate its importance as a source of safety to the patient. With the guide and tubes, it has been found that the rapid and permanent dilatation of a stricture can be accomplished in the most prompt and effectual manner, and, at the same time, the proceeding may be so cautiously regulated as to afford the patient the utmost possible protection against the application of all unnecessary force.

After the *last* silver tube has been passed at any sitting, an elastic one may be introduced, and left in the canal, the guide being withdrawn through it. The utility of leaving a flexible instrument in the canal has been described by Sir Benjamin Brodie, in his Lecture on Surgery, in the following terms:

“This method is particularly applicable—

“1st, Where time is of much value, and it is of great consequence to the patient to obtain a cure as soon as possible.

“2nd, Where a stricture is gristly and cartilaginous, and therefore not readily dilated by ordinary means.

"3d, Where, from the long continuance of the disease, the urethra has become irregular in shape, or where a false passage has been made by previous mismanagement.

"Now if, instead of a bougie, you use a gum-catheter, and allow it to remain, the urine flowing through the catheter, the contact of it with the urethra is prevented, and the rigor is prevented also."\*

The flexible tube, therefore, will not only furnish the ready means for re-introducing the guide without the danger, or even the possibility, of making or entering a false passage, but it appears by its action to maintain the dilatation which the tubes produce, and to promote the rapid absorption of the submucous deposits, which, in many cases, caused the obstruction of the canal. In a word, the permanent cure of strictures of the urethra by the plan of the tubular treatment depends mainly on the thorough absorption of the extraneous substance usually interfering with the normal condition of the urinary canal.

When once a guide has been introduced into the bladder, the power of the operator over the stricture is all but unlimited. The late Mr. Guthrie, to whom this Society is indebted for many highly valuable communications, has stated, in his work on "*Diseases of the Urinary Organs*," that it is impossible to speak too highly of the invention of treating diseases of the urethra by means of the urethral guide and tubes. The same distinguished surgeon also remarked that "it is capable of rendering great service when the withdrawal of a sound or catheter cannot always be certainly followed by the re-introduction of another, and which withdrawal it renders unnecessary until a larger one is introduced over it—a very great improvement, which no surgeon should neglect; for when this can be done, no other operation is immediately necessary."†

Mr. Solly, surgeon to St. Thomas's Hospital, at a meeting of the Royal Medical and Chirurgical Society in April, 1853, whilst objecting to the use of the knife in the treatment of stricture, said that "he had found the plan of the urethral guide and tubes very useful in expediting the cure."

Mr. Coulson, in a lecture on the treatment of stricture of the urethra, delivered at St. Mary's Hospital in December, 1853, spoke of the instruments before you in strong terms of approval.‡

\* Brodie, Sir B. O. *Lectures on Diseases of the Urinary Organs*. Third edition, pp. 48-9.

† Guthrie, G. J. *On the Successful Treatment of Stricture of the Urethra, &c.*, pp. 40-1.

‡ In this lecture, published in *THE LANCET*, Mr. Coulson said:—"Mr. Thomas Wakley has invented several ingenious instruments, the utility of which has been demonstrated by very extensive practical application. They are intended to ensure entire command over the pervious urethra; and they present this additional novelty, that in their effects they combine two methods of treatment commonly employed—viz, rapid and permanent dilatation of the stricture." After describing the

Mr. Lizars, in the preface to the third edition of his work on "Stricture of the Urethra," states of the tubular instruments that "those who have witnessed their operation speak favorably of their beneficial effects. They appear to me," he says, "to be formed upon a very ingenious principle, and I have no doubt, if cautiously inserted, that they may prove a useful curative auxiliary."—(p. xxiv.)

Quotations of a similar character might be multiplied, but probably, enough have been cited to prove to this Society that the method of treating the strictured urethra, by means of the instruments now recommended, is worthy of their earnest consideration. I may also observe that the late Mr. Guthrie, who several times witnessed their action at the hospital with which I am connected, frequently remarked to me, that the objection to their use arose from the great power which they placed at the disposal of the surgeon, and that "a surgeon could really do too much with them at one operation." When, however, it is considered to whose hands the employment of these instruments is to be confided, it cannot be believed that patients will suffer from an undue exercise of power, or that a want of caution will be shown by the operator.

The removal of the stricture may be effected, either rapidly or slowly, according to the intention of the operator. Sir Benjamin Brodie has most truthfully observed that "the temper of the urethra varies as much as the temper of the mind."\* The surgeon must therefore exercise his discretion as to the rapidity with which the strictured part should be dilated. If the intention be to proceed slowly, the treatment may be conducted, after the first two or three operations, by means of a silver tube, which may be allowed to remain in for an hour or so. Flexible tubes, except at two or three of the earliest sittings, need not be employed in such cases as these. But if a rapid cure be decided upon, all the means at the disposal of the operator must be employed with promptitude, caution, and watchfulness, in order to effect a safe and speedy termination of the treatment. It may be observed that strictures of many years' standing have been removed with remarkable promptitude by the tubular system of treatment.

Before using the instruments, two or three days should be occupied in preparing the patient for operation. Opportunity should be also taken of examining the urine, and obtaining a clear history of the malady. By examining the urine, of course an elaborate

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instruments, Mr. Coulson adds: "Those who are acquainted with the difficulties which often beset the surgeon during the treatment of stricture, must confess that the principle on which Mr. Wakley's instruments act is one of deep importance, and that great credit is due to him for the ingenious and perfect manner in which he has attained the desired object. .... To dilatation it is objected, that the surgeon can never be sure of being able to re-introduce any instrument after it has been once withdrawn; but the disadvantage has been remedied by the excellent instruments of Mr. Thomas Wakley."

\* Brodie, *op. cit.*, p. 54.

quantitative or qualitative analysis is not meant; but the specific gravity of the urine should be ascertained, its reaction determined, and it should be examined for vesical mucus or pus, and the products of calculi. It is necessary to be the more particular with respect to these preliminary measures in proportion to the severity or complications of the case. Cushions, made of Hooper's prepared India-rubber, containing hot water, should be applied to the region of the bladder above the pubes, and also against the perinæum. The urethra should be carefully examined with a guide suited to its calibre; and the necessity cannot be too strongly urged of carrying the point of the instrument along its anterior surface. With patience and perseverance, aided by the usual dexterity which a surgeon should possess, the instrument will be passed through the stricture. This step having been accomplished, the movable handle of the guide is to be withdrawn, the index-rod screwed on, and a corresponding silver tube passed upon the guide through the stricture. It will be observed that the guides are straighter than the catheters used by the late Mr. Liston, and they are made so as to allow the urethra to be straightened as much as possible, which is effected by making a fulcrum of the triangular ligament, the penis being brought rather lower than at a right angle to the body. By this mode of proceeding, the tubes are easily passed to the neck of the bladder. Having sufficiently expanded the stricture, the last used silver tube is withdrawn, and a flexible one is then passed over the guide, which should be immediately withdrawn through it.

This is commonly a very easy proceeding, and requires no further manipulation than a rotatory motion of the instrument, given to it by means of its flanges. The tubes, which are lined with flexible metal covered with elastic fabric, glide easily. The urine is then discharged, and the tube, at the discretion of the operator, is gently withdrawn to such an extent as to allow only a small portion of the point to project beyond the neck into the bladder. By retaining it in that position its point is prevented from irritating the mucous membrane of the bladder, and thus those rigors are prevented which are so distressing to the patient and alarming to the operator.

Many cases are on record where the point of the instrument, tied down against the walls of the bladder, has caused their ulceration and perforation. I remember being present at the post-mortem examination of a gentleman who was said to have died of stricture, but the inspection disclosed an ulcerated perforation of the bladder, just at the place where the point of a small silver catheter had rested. In that case the catheter had been tied in for three days. The gentleman was reported to have a stricture for thirty years, and a hard, gristly tumour was found, nearly encircling the urethra, which could be easily felt externally. Upon *slitting* open the urethra, the stricture was discovered to occupy its

membranous and bulbous portions, where the instrument had been grasped by the contracted part. The mucous membrane there was more congested than elsewhere, and covered over by a thick mucopurulent matter. (The instrument that had been used was quite blackened from this part to its point.) The contracted portion had evidently been greatly widened by the long pressure of the catheter. Upon cutting out a portion of this gristly part of the urethra, the mucous lining was found to be thin, and strongly adherent to the subjacent structure, from which it could not be torn without bringing away some of the indurated tissue. When scraping it, a very minute quantity of the same kind of viscid matter came away upon the knife. Upon dissecting back the indurated part, it was found to merge into the structure around which it had formed; no defined border to it could be ascertained. The hardened structure was of a reddish-white colour and fibrous, and was deposited by the inflammation which had at some time or other been set up. A false passage existed, which left the urethra half an inch in front of the thickening, and passed between the urethra and the subjacent structures, entering the surrounding callosity.

This case appears to assist greatly in the solution of that most difficult problem,—How is it that the pressure of an instrument on the urethra relieves or opens a stricture? The rationale in the case of this man seems to be, that upon the introduction of the catheter the mucous lining of the urethra became inflamed, and secreted a muco-purulent matter; and that the pressure produced softening and absorption of the hard callus external to the mucous membrane. Although the pressure was exerted upon the hardening through the elastic mucous lining, the latter was neither absorbed nor ulcerated by this pressure, but only irritated and excited to the extent of secreting and discharging the muco-purulent matter. A similar action is manifested in the absorption of a tumour from pressure made upon it over and through the skin. My belief is, that in rapid dilatation the constant or frequent presence of an instrument induces absorption of the adventitious submucous formation producing the stricture, but that in slow dilatation the action is only a mechanical distension of the contracted canal, the interstitial structures losing in length what they gain in circumference, and soon again relapsing into their previous form. Opportunities such as were afforded by this case—the man dying whilst actually under treatment—are very rare. A catheter had been kept in the bladder until a very short time before the death, for no symptoms were noticed by his surgeon, a very able practitioner, indicating the accident that had taken place. The patient evinced merely excessive prostration; he did not complain of pain until a few hours previous to his decease.

In resuming the subject of the *treatment*, I may state that the urine having been discharged, the external surface of the tube should be plugged, and the instrument secured with its point still

only just projecting within the bladder, by means of tapes passed through its flanges and tied around a broad piece of India-rubber, which should encircle the penis. The knees of the patient should be raised and supported by pillows placed underneath them, and the India-rubber bags containing hot water used as before stated.

If the flexible tube be retained without exciting disturbance it may be removed at the expiration of twelve hours after the guide has been reintroduced through it; and then, the appropriate metallic tubes having been first passed over the guide, a larger flexible tube may be introduced and retained, as in the prior instance. By this mode of proceeding, in seven days a hard cartilaginous stricture has been so far dilated that a common No. 12 sound or catheter could be easily passed; but as a rule the safety of the patient would be best consulted by not endeavoring to obtain such a result in less than a fortnight, or from the commencement of the treatment, the more extended term allowing to the urethra a more protracted repose between the different operations. The strictly medical treatment accompanying these proceedings is too plainly indicated to require description.

In illustration of the action and utility of the tubular treatment of strictures of the urethra, I could furnish the Society with the details of numerous cases, including almost every variety and complication, but the time already occupied precludes me from doing more than reading abstracts from some interesting cases which have lately been under this system of treatment.

CASE 1.—A gentleman from the country, aged about forty-five years, married, but without children, was sent to me by his medical attendant. For many years past he had suffered from a most distressing stricture of the urethra. A small-sized instrument could occasionally be introduced into the bladder, but severe rigors, lasting for hours, generally supervened upon the manipulation. Latterly attacks of complete retention of urine had become frequent. Instrumental relief was impossible; and the general local and medical treatment on each occasion became less efficacious. The urine only dribbled away, accompanied by a constant desire to micturate, the discharge of it never satisfying the desire of the patient, or giving him a sense of relief, so large a quantity continually remaining in the bladder, after all the efforts made for its expulsion. Indeed the capacity of the bladder, from its incessant distension, had become enormous.

When first seen by me, this patient presented the appearance usually indicated after the long continuance of a wearing and fatiguing disease. On examination, I found the perinæum swollen and indurated, and the prostate painful to the touch. Upon the introduction of a small common catheter, I could do little more than discover a hard stricture, existing in all probability throughout the length of the indurated tumour. Believing, from the contents of the note which this gentleman brought to me from his

surgeon, that I had to contend with a very severe and intractable case, I advised that he should take up his abode at the Sanatorium. The progress of his case was carefully and minutely narrated by Mr. T. Gill, the resident medical officer.

After the preliminary treatment, the patient was placed in bed, and the small-sized guide was, after very considerable trouble and difficulty, passed into the bladder. The handle of the guide was screwed in, and a No. 4 silver tube was carefully passed over it, through the strictured portion of the urethra, into the bladder, and then an elastic tube No. 4. The guide was then withdrawn. The tube was drawn out to the prostatic portion of the urethra. During the examination, I had discovered the urethra, anterior to the stricture, to be somewhat more contracted than natural; and there was a false passage to the right side, into which the point of the instrument always slipped, unless held well towards the other side. The contraction extended along at least two inches of the urethra. The patient was greatly fatigued; but was comforted by hot cushions placed over the bladder and the peritonæum. The tube was kept in for several hours.

On the following day the small guide was passed. The point again hitched at the commencement of the false passage, but it was safely introduced into the bladder. The urethra was, however, tender throughout. The handle of the guide was screwed on, and a No. 6 silver tube was glided on the guide through the stricture by a rotatory motion, conducted by means of the flanges of the tube. A No. 6 elastic tube was then passed into the bladder, and the guide was withdrawn through it. The bladder was washed out with a very weak solution of dilute nitric acid. The peg was inserted and the tube withdrawn just to the opening of the bladder, and fixed there. To remain in for twelve hours.

In short, in fourteen days, this distressing case proved perfectly amenable to treatment with the urethral guide and tubes, the instruments being employed, as already detailed, upon alternate days, and the flexible tubes being retained in the stricture so long as was consistent with the condition of the patient.

**CASE 2.**—In proof of what may be effected, even when a stricture of the urethra is accompanied by the most serious complications, I will cite an instance in which I was consulted by a London practitioner, where a stricture of very long standing was successfully treated, although complicated with a false passage, urinary fistulæ, extensive disease of the bladder, and a vesical calculus. The gentleman was well known to many surgeons, under whose care, at different times, he had placed himself, but never, by the adoption of any plan of treatment had so large an instrument been passed, followed by an ability to expel so copious a stream of urine, as when the urethral guide and tubes were employed. The urine, when voided, smelt strongly ammoniacal, and after standing a short time deposited an immense sediment, consisting of



mucus and pus. The patient was reported to suffer from long-continued rigors after any attempt to pass an instrument, and he told me that *a difficulty*, experienced even in the hands of eminent surgeons, had been the impossibility of introducing a larger instrument into the bladder, even when a small-sized bougie had been passed into it with comparative ease. Under the use of the tubes, in less than three weeks, a complete command of the urethra was obtained, without the occurrence of rigors, or any other symptom arising to delay the proceedings. At the expiration of that period, a common No. 12 sound could be introduced. The perineal fistula had quite healed. I lay claim to no manual dexterity as contributing to this fortunate result: the guide and tubes, in other hands, would doubtless have proved equally efficacious.

CASE 3.—A gentleman, forty-one years of age, first complained of stricture eighteen years since, but it was not then so severe as to induce him to procure surgical aid. Twelve years ago, the late Dr. Lynch, of Farringdon-street, first introduced instruments into this patient's urethra. Two years afterwards he suffered greatly from stricture; and afterwards he went to Australia, where, he said, a false passage was made. He returned to England, and consulted a medical practitioner; but his condition progressively became worse, and at length a No. 1 catheter could not be passed. By the advice of his medical attendant, he now placed himself under my care, and he was recommended to take up his temporary residence at the Sanatorium. On examination, the seat of the stricture proved to be about the membranous portion of the urethra. A No. 1 guide was, after considerable manipulation, introduced. The subsequent treatment was pursued rather more slowly in this case in consequence of the extreme emaciation and debility of the patient. He left the Sanatorium, not only relieved as regards the stricture, but much improved in general health, in three weeks from the day of his arrival.

Finally, the advantages which experience justifies me in stating are obtainable from the employment of the new instrument may be thus enumerated;

The rapidity,

The safety, and

The certainty of the removal of strictures of the urethra.

The permanency of the relief arises from the *absorption* of the submucous deposit.

The certainty of the tubes not making or extending any false passage.

The complete control over the urinary canal after the first introduction of the guide.

The relief afforded, often almost without pain.

The obliteration of false passages and fistulæ.

The freedom of the urinal flow after the first introduction of the guide.

The facility afforded for washing out or clearing the bladder at any period of the treatment.

The accomplishment of immediate and lasting relief without producing any breach of substance by means of caustics, or the employment of any cutting instruments.

Non-malignant strictures of the rectum and the œsophagus may be treated effectually with instruments constructed upon the same principles with those employed for the dilatation of contractions of the urethra. This assertion could be illustrated by the histories of several very interesting cases, fully justifying its truth. I must, however, defer the details of these cases, and content myself, for the present, with merely describing and exhibiting the instruments in question, and leaving the subject for the consideration of the Society.

The rectum instruments consist of a flexible guide of soft metal or elastic gum-fabric, and four dilating-tubes, composed of the same materials, ten inches in length, shaped at the discretion of the surgeon, and of different sizes, numbered 2, 4, 6 and 8, corresponding to those sizes on the gauge of common rectum bougies. One end of the tube is made upon the same principles as those employed in the construction of those for the urethra, whilst the other end terminates in a broad, everted, cup-shaped rim.

By the means of a long flexible guide, an O'Beirne's tube of a much larger size can be also used. The one on the table is a full quarter of an inch in diameter internally. It is believed that this will prove of great service when the treatment by means of O'Beirne's tube is indicated.

The œsophageal instruments consists of a long flexible guide, and dilating-tubes of elastic gum, twenty inches in length, of different sizes, and manufactured so as to glide over the guide with the same ease as the urethral instruments. I may here advert to the fact of Mr. Erichsen, in his work entitled "Surgery," having mentioned a case of œsophageal stricture, in which he used, with considerable advantage, instruments of a similar construction to the urethral tubes.

The instruments for the dilation of the cervix uteri consist of a guide, eleven inches in length, with a movable handle, to facilitate its introduction, and of silver and flexible dilating-tubes which glide over the guide in the same manner as those for the urethra, and are made of various sizes, corresponding, in some respects, with those of Professor Simpson, but very considerably lighter. These tubes, at their internal extremity, have the same formation as those for the urethra. The other end is furnished with an inverted, cup-shaped rim, intended to fit the os uteri.—[*Lon. Lancet.*

*On the Early Performance of Tracheotomy in Croup.* By G. M. JONES, Esq., Surgeon to the Jersey Hospital.

The successful result of an operation leads us naturally to recommend its adoption in other cases in which identity of character exists. To propose an operation is one thing, but to induce others to follow in our footsteps requires something more; we must be able to show its utility, probably its absolute necessity, and that the well-being, oftentimes the very existence, of our patient depends on its performance. To hear some speak of tracheotomy in croup would almost lead us to imagine that the operation is a new one, a mere experiment and the offspring of some enthusiastic innovator.\* It would be foreign to my purpose to prove the contrary, my present object being to endeavor to persuade its contemners that they may be in error, and to show that if resorted to in time, it may be the means, the only means left us to preserve the life of a fellow-creature, the greatest and the most heartfelt wish a medical man can experience.

It is not the favorable result just given the history of, † which leads me to speak highly of the operation. I have long been impressed with its propriety, and only waited an opportunity to judge for myself—but even had my views at any time been different, or had my case terminated fatally, the success which has attended M. Trousseau's endeavors, and which deservedly entitle him to be looked upon as the first French authority on this subject, and the unwearied exertions of my friend Mr. Henry Smith, of London, which place him on the same level as his Parisian competitor, would certainly have shaken, or altered altogether my views, even had they before been opposed to operative interference.

It may reasonably be asked—Why is tracheotomy in croup so little resorted to in England? Why, to make use of a homely phrase, is it at such a discount? The reason is easily explained—we have the prejudices of parents to overcome—the opinion of

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\* Although croup, as a distinct disease, and tracheotomy, as one of the means employed for its cure, have only been brought conspicuously into notice within the last years, both are undoubtedly of ancient date. The quinsy described by Hippocrates as existing "without any evident tumor in the neck or fauces, but attended with violent strangulation or difficult respiration, and which proves fatal either on the first or third day," and the cynanche of the Greeks, stated to be "a contraction of the office of the asperia arteria, by which not only the voice is suppressed, but respiration is performed with difficulty, and sometimes wholly stopped, often in so short a time as to kill the patient in twenty-four hours, or the third day," is the same affection which we now designate as "croup;" and the following passage, also to be met with in one of the earlier writers, unquestionably proves that tracheotomy was then one of the established methods of cure in cases of "cynanche trachealis." But if, in a quinsy, after the use of proper medicines and repeated evacuations of blood from different veins, there is still a necessity for making an incision in the trachea, in order to prevent suffocation, the operation may be performed in three different manners," etc.

† Vide *Medical Times and Gazette*, Oct. 4.

some of the highest authorities to oppose—and the ill success which has almost invariably attended its performance to account for in such a manner, as to show that death has possibly arisen, more from neglect or inattention to other important points, than to the operation itself, or to any effect it may have produced on the human economy.

It is by no means surprising, that parents, particularly in the low grades of life, object to submit their child to an operation, the nature of which they will naturally make inquiries about, and which when explained, conveys a degree of horror to their minds, only surpassed by the reply given to their second question—its probable result in the present instance, and the amount of success which has attended it in others. The conscientious Surgeon cannot promise a certain cure, a circumstance not to be overcome by the ignorant—precious time is lost, till at last a tardy acquiescence, at times an earnest entreaty to do any thing which may offer a chance of saving the sufferer is given; but then the last stage of the disease has already set in, the operation is performed, and is almost immediately, or in a few hours, followed by death. As a natural consequence the operator has all the odium, and the disease for which it was performed, and which Dr. West very justly says, “is unquestionably one of the most dangerous to which childhood is liable,” is forgotten. But if we have this to contend with among the lower orders, the surgeon has equal difficulties, equally unfavorable chances of success among the superior classes of society; he has “the opinion of some of the highest authorities to oppose;” and if called in by them, or by those who adhere to their views, he comes as the “forlorn hope,” oftentimes as the “last witness to expiring life;” this brings me to the most important point of my subject, “the endeavor to persuade its contemners that they may be in error.”

Many authors of indisputably high reputation, whose works are constantly consulted, and whose views and treatment respecting the nature and cure of disease are the beacons by which thousands are guided in their line of practice, speak of tracheotomy in croup in a manner which, to say the least, offers but little encouragement to its performance. I shall quote the words of a few of the most eminent on the subject: “When signs of approaching death have come on, lividity of the lips, coldness of the skin, and a tendency to stupor, the question *will* obtrude itself, whether there may not still be a chance of saving the patient by tracheotomy. In the first place, the operation is much more difficult to execute upon children, than upon adults, and is attended with more perplexing hemorrhage; but a greater objection is the existence of the preternatural membrane, which precludes air being admitted into the lungs. Tracheotomy has again and again been practised in this complaint to no purpose, and I should be inclined to look upon it as absolutely hopeless, but for two instances recorded in

the *Medico-Chirurgical Transactions*."\* "Whenever tracheotomy is performed, it should be after every other remedy has failed, and not before any other has been attempted, as the exudation extends through the ramifications of the trachea, and probably through the lungs, there is but little hope, after all, of any benefit from such an operation."† "There does not appear to be a chance of success from this operation in any case wherein the treatment developed above has failed. \* \* \* I perfectly agree with Goelis, Cheyne and many others, in concluding that it should seldom or never be attempted in this disease."‡ "In England the result of almost every instance of the performance of tracheotomy in croup has been so unfavorable that the operation is scarcely looked upon as a justifiable proceeding."§ Such, then, are the opinions propounded by some of the most weighty of English authorities.

Under such circumstances, can it be a matter of astonishment that few general practitioners are willing to attempt an operation, the result of which is likely to bring discredit on themselves? Now let me ask, from what cause or causes combined is this operation so generally followed by fatal consequences? I have no hesitation in stating that a contrary result might, in all probability, ensue, if the trachea were opened, not "when signs of approaching death have come on," nor "when every other remedy had failed," but at a much earlier stage of the disease—in a word, before all hope of the efficacy of medicine had ceased altogether. Better to expunge the operation of tracheotomy in cynanche trachealis from all works on practical surgery, than perform it under circumstances which, from the weakened and exhausted state of the patient, must render an operation much less formidable than this one—an accelerator of death, and not the means by which death may be averted. Why are the statistical returns in cases of strangulated hernia more favorable now than formerly?—is it not from operative measures being resorted to before symptoms of approaching dissolution manifest themselves? and in what light would the advice of a surgeon be looked on now, were he to recommend us to wait till repeated vomiting of fecal matter took place before subjecting his patient to herniotomy? Whatever theories may have been broached—whatever views medical men may have taken of the causes and other circumstances connected with croup, there exists, I believe, among the most experienced, almost, if not altogether, unanimity of opinion that blood-letting, antimony, calomel and warm baths, are the means we are called upon, first of all, to employ in this dangerous disease. I have too often had recourse to them, and others as their adjuncts, not to add my humble testimony to their efficacy; and, happily, many

\* Dr. Watson's Lectures on the Practice of Physic.

† Dr. Mason Good's Study of Medicine.

‡ Dr. Copland's Dictionary of Practical Medicine.

§ Dr. West on the Diseases of Infancy and Childhood.

cases will yield to their judicious employment, but that all the remedies recommended are to be carried out *seriatim*, and some tried a second and even a third time, as a matter of course, before resorting to tracheotomy, appears to me the point which high authorities ought to employ their pen in condemning, rather than dwell on the fatality of an operation, possibly occasioned, in very many instances, from too systematically following out the plan recommended by writers.

Are there not diseases in which we can safely pronounce our patients better, although the symptoms continue stationary for a time? This is exemplified in several forms of fever; and, on the other hand, we meet with complaints in which a stationary state must be regarded as most unfavorable, and croup can be brought forward as an illustration. For instance, we are called on at an early hour to attend a child laboring under a severe form of this disease; in the evening we find our patient possibly not worse, but in no respect better. Are we, then, to rest satisfied in imagining that, although we have not gained, still we have not lost ground? If we think so, we deceive ourselves; for a whole day we have been unwearied in our exertions, we have exhausted all the means medical science has placed at our disposal, and with no better result than having been able to keep symptoms stationary, and that in an affection which not unfrequently runs its fatal course in eighteen, twenty-four, or thirty-six hours. Can a repetition of already tried remedies bring on an improved condition? I do not mean to state this can never happen, but I feel confident practical men will bear me out when I say that, in a vast majority of cases, the absence of any improvement after steadily pursuing for twelve or sixteen hours the medical course most approved of, leaves but very slender hopes that a continuation in a similar line of practice will be crowned with success.

I have already spoken of the improved statistical returns in cases of strangulated hernia, and the probable reason why they are so satisfactory. Those who have attentively watched the progress of surgery, must admit that it yearly makes rapid strides towards perfection; and it appears to me that there is, in many respects, a striking resemblance between hernia and croup, not only as far as regards symptoms, but also with respect to the indications of cure. In hernia, we have strangulation of the bowels to overcome; in croup, obstruction to the passage of air to remove; both diseases may come on suddenly, and without premonitory symptoms; in each the most prompt and energetic treatment is required; both are fraught with the greatest danger to life; each runs its course rapidly; the same delay which may prove fatal in one case becomes equally so in the other, and the discriminating judgment which tells the surgeon when it might be hazardous to delay operative interference, guides, or ought to guide, the physician in recommending surgical means to super-

sede, for a time, those he has zealously, though unsuccessfully, employed.

Is the operation a dangerous one? This is a question not easily solved: some authorities say that it is, others are of a contrary opinion,\* and when this is the case, I know of no better rule to follow than this: not allow ourselves to operate solely under the latter impression, or be intimidated by the former; to hope the one, and be at the same time fully prepared for any casualty which may supervene. But that which must ever make tracheotomy in croup dangerous, is, the performing it when symptoms of dissolution are at hand. Blood lost then is assuredly "life's blood," and if this operation is at any time attended with "perplexing hemorrhage," what effect must even the loss of the most trifling quantity produce on the dying; almost as well may we operate on the dead subject in the hope of seeing returning life, as on the expiring, with the expectation of witnessing recovery.

In recommending an earlier performance of tracheotomy in croup than is practised in England or advocated by British writers, I am far from advising it to supersede other measures (compatible with existing symptoms). It is said that in France there are many instances in which this operation has been performed on patients whose disease would probably have been amenable to other treatment, and cases are mentioned in which none of any description had been tried before. This practice is not advisable, for there is no operation, however trivial it may appear, which can be positively pronounced as free of ulterior danger, and consequently none ought ever to be performed unless really necessary; thus it appears that in France, surgeons often operate earlier than is required, while in England they almost invariably do so too late. The observations I have made are intended to induce practitioners to adopt a middle course, that is to be neither too hasty nor tardy, but to be guided in a case of croup as they would in a case of strangulated hernia.

The success this operation has been attended with, in France, is most encouraging; but there is another reason, besides operating earlier than we do, which undoubtedly gives our continental brethren an immense vantage ground over us. There croup presents a different character to that which it exhibits in England; with us it is certainly a much more dangerous complaint. This difference arises, in a great measure, if not altogether, from the parts more materially implicated. "In France, croupal symptoms are induced, in the majority of cases, by the extension to the larynx of false membrane, originally deposited on the fauces and left palate, while the wind-pipe itself is comparatively seldom in a state of active in-

\* Casserius pronounces, "those men unskilful, cowardly, and even cruel, who foolishly neglect this operation, which is often safe in itself, and attended with the most speedy and salutary effects, and who suffer their patients to die for want of this proper and seasonable assistance."

flammation, often altogether unaffected; and the bronchitis and pneumonia, which in this country so often, and so seriously complicate the disease, are of less common occurrence.\* But it appears to me, that it is this very difference in type which ought to lead us to effect an exchange of treatment. In England, the symptoms brought on by croup are not unfrequently more dangerous than the original disease, to wit, bronchitis and lung affections will follow, but not often precede cynanche trachealis. Both these formidable affections are in a greater measure, if not altogether dependent on an obstruction to the passage of air; so that, in overcoming this as quickly as possible, we prevent congestion, and thus have to grapple with one, instead of three separate diseases.

My views are so much in harmony with those expressed by Mr. Smith, in his valuable paper in the *Medical Times and Gazette*, of the 26th January, 1856,† that I feel more confidence in stating my conviction that—notwithstanding the difference both in the nature and the type of croup in this country, and the more formidable character it puts on than is generally met with in France—our earlier introduction of air would not only give us a larger percentage of recoveries, but would place this operation in the same favorable light in which it is now regarded in Paris and other parts of France.‡ Success would enable us to speak with more confidence as to a favorable result in those cases to which we are called early, so that the prejudices of the ignorant would be more easily overcome, and the surgeon be found at the bedside of the opulent, not as at present, when all other remedies have failed, and when death is at hand, but at a time when there is still strength enough and hope enough left, to lead to as reasonable prospect of recovery from tracheotomy, as was before held out by each of the remedies which had already preceded its performance.—[*N. Orleans Med. News and Hosp. Gaz.*]

*Cathartics in Dysentery.* By O. C. GIBBS, M. D., Frewsbury, N. Y.

At the meeting of the Buffalo Medical Association, Sept. 2d, 1856, as per report of proceedings in the October number of the Buffalo Medical Journal, a discussion took place in regard to the propriety of using cathartics in dysentery; also the *kind* of cathartics best calculated to fulfill the indications in that disease. As

\* Dr. West on the Diseases of Infancy and Childhood.

† I cannot too strongly recommend the perusal of this valuable paper to those who are interested in the treatment of this dangerous disease. Mr. Smith, with that characteristic candor which speaks volumes in his favor, is not backward in acknowledging his own failures, while he points out the success of another in proof of the desirableness of his operation.

‡ "In certain European countries, and in England particularly, tracheotomy in cases of croup is still so isolated an operation, that in all Great Britain it is not so much practised as in Paris alone."—*Lectures on Tracheotomy in Croup*, by Professor *Trousseau*.



this question is fairly before the readers of the Journal above mentioned, we suppose it is open for the expression of opinion or experience, by any of its many readers. Hence, we give expression to a few thoughts, based partially upon our individual experience, and partially upon the generally received opinions in regard to the nature of the affection under consideration. A knowledge of the nature or pathology of any disease, is, perhaps, the surest guide to the appropriate indications of treatment. The public generally, are apt to look upon all diseases accompanied with frequent evacuations from the bowels, as similar at least, if not identical in character. Physicians themselves are not always free from this vagueness of nomenclature. In muco enteritis, as well as milder forms of mucous irritation, each case is accompanied with a diarrhoea or frequent alvine evacuations, and the public generally do not discriminate between such cases and dysentery, and we have seen physicians not unfrequently, if not guilty of the same error in diagnosis, at least of the same vagueness of nomenclature. Dysentery consists in an inflammation of the mucous membrane of the colon and rectum, and, though the evacuations may be over in ten minutes, yet, except it may be in the incipency of the disease, they are not faecal, but consist almost wholly of mucus and blood. Hence, though the griping pains in the abdomen and the tenesmus may be never so great, though the characteristic muco-sanguineous evacuations may be never so frequent, or the straining at stool never so persistent, the case may be accompanied with obstinate constipation. The public generally look upon the frequent bloody evacuations as constituting the whole of the disease, and, consequently, urge the importance of powerful astringents, which, if unadvised by the attending physician, they sometimes clandestinely and injuriously bring to bear upon the disease. But the physician who resorts to them, to the exclusion of evacuants, will certainly have no reason to boast of success.

Permit us to say, that we do not propose to discuss the nature, cause, or symptoms of dysentery, nor to enter into full details of treatment. We propose only to make a brief expression of our opinion, upon the question under discussion, viz., the propriety of cathartics in dysentery.

Some authorities have condemned the use of evacuants in dysentery, on the ground of their supposed irritating influence upon the inflamed mucous membrane. But we feel confident that, when the evacuant is judiciously selected, and repeated with due discrimination, and with proper adjuncts, its irritating influence is more fancied than real. The object of the cathartic seems, at first, to be to free the bowels from irritating secretions, and the object of their repetition is, conjoined with the above, to prevent constipation, which is the inevitable sequence of the inflammation and consequent fever. A second, and not less important object to be secured by the evacuant, is to unload the portal veins, thus dimin-

ishing congestion in that important circulatory system, and to stimulate the capillary circulation in the liver, which is often sluggish, resulting in a deficient biliary secretion.

In regard to the choice of a cathartic there has been and is a great discrepancy of opinion. Some have advised calomel at first, to be succeeded by castor oil; others have advised castor oil from the first. Rhubarb. compound powder of jalap, cream tartar, epsom salts, rochelle salts, &c., have all had their advocates.

We were formerly in the habit of giving, at first, calomel intimately commingled with rhubarb and a little pulverized opium, and afterwards, whenever an evacuant seemed demanded, gave castor oil with a few drops of laudanum. But recently we have made choice of a different evacuant, and, so far, have been much pleased with the change. In the June number of the *Western Lancet*, for 1855, Dr. D. B. Dorsey communicated the result of twenty years' experience with a cathartic mixture, first proposed to him by Dr. Lemoyne, of Washington, Pa. Summing up his results he said "in a practice, not very limited, in the cities of Wheeling, Va., and Steubenville, O., in the latter of which dysentery prevailed as an epidemic twice or thrice during my residence there, I had the high gratification of seeing all recover who were treated with this remedy from the commencement of the attack." With this high encomium before us, we made trial of the combination in the next case that came under our observation, and with such happy results that, except in young children, we have used it in all dysenteric cases since, with success in all cases.

We quote Dr. Dorsey's formula and directions from the paper above referred to. "Take of saturated solution sulph. magnesia, seven fluid ounces; aromatic sulphuric acid, one fluid ounce—mix.

"The saturated solution is prepared by dissolving epsom salts in an equal quantity of water, *by weight*, at 60 deg. Fahrenheit. It will be ready for use in eight or ten hours. During that time it should be shaken occasionally.

"The medium dose of this medicine for an adult, is one tablespoonful, delivered with two or three ounces of water, every four to six hours, until it gently moves the bowels. It should be given regularly, and perseveringly, until the bowels are manifestly under its influence, which will be evinced by feculant discharges, abatement of tenesmus, and general feeling of relief. The size of the dose and times of repeating it, must be varied by the practitioner's judgment, according to many circumstances of age, violence and stage of disease, &c. Sometimes it will require two tablespoonfuls of the medicine, every three or four hours; at others a teaspoonful every six or eight hours will be sufficient.

"Accompanying each dose, when the pain and tenesmus are great, one-sixth of a grain of sulph. morph. may be given. But this remedy, also, must be varied, both in quantity and frequency of repetition, according to circumstances.

We have seldom or never exceeded tablespoonful doses, and oftener fallen below that. But instead of giving once in four or six hours throughout the twenty-four, we have usually commenced with it in the morning, to be repeated every three hours until it operates, always combined with a small quantity of morphine. This course we repeat every day so long as the indications demand. During the remainder of the twenty-four hours, we give ipecacuanha with morphine, or such other remedies as the circumstances of the case seem to require. It may not be amiss to say here that mercurials are incompatible with the mixture.

The acid doubtless stimulates the capillary circulation in the liver, promoting bilious secretion, while the sulphate of magnesia relieves the portal congestion and frees the bowels from irritating secretions. From the relief which speedily follows its action, to the tormina and tenesmus, greater than that following any other evacuant, we cannot help thinking the acid has a direct sanitary influence upon the inflamed mucous membrane.

With young children, where smallness of dose and pleasantness of taste are always considerations of much importance, the above mixture is decidedly objectionable. The taste is rather disagreeable, and the necessity for diluting the mixture, renders the bulk such as no child will readily take. In such cases we have been in the habit of scorching rhubarb, adding boiling water and extract of hyosciamus, the dose of such proportioned to the age and condition of the patient, sweetening the mixture and flavoring with nitre.

This is to be given in repeated doses in the morning, sufficient to produce a laxative effect, and during the balance of the day we give hydrargyrum cum creta, in small doses, with Dover's powders or such other medicines as the circumstances of the case may indicate.—[*Buffalo Medical Journal*.]

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*On the Use of Ice in Uterine Hemorrhage.* By E. A. HILDRETH, M. D., Wheeling, Va.

Every physician has experienced the uncertainty, or to say the least, the want of promptness in the effect of the "usual" remedies for this difficulty. The remedy we propose is the *introduction of ice into the uterus*. It is not proposed as an "experiment," for it is now about ten years since we first used it, and have a sufficient number of recorded cases to *prove* its utility.

The safety of passing a quantity of ice into the cavity of the uterus after the expulsion of the child or placenta, has been questioned by some, as we believe, on purely theoretical grounds. The effect in every case we have used it, has been to contract the uterus quickly, energetically and permanently; and as a matter of course stop the uterine flow. We have yet to see any unpleasant result,

directly or indirectly arising therefrom, on the contrary, the relief afforded is prompt and permanent.

We do not wish to theorize on the subject at this time; allow me to subjoin a few *facts* as observed and noticed when they occurred.

CASE I. June 16th, 1846, Mrs. McC., æt. 40, in labor with her fourth child. Describes her previous labors as "lingering." On examination "per toucher" found the os uteri thick, firm, opened as large as a half dollar—membranes entire—breech presenting, pains slight. Prescribed Pulv. Ipp. Comp. grs. xii, and left requesting them to call on me when the pains became more active. Called back in 6 hours, found her pains strong and expulsive, and half an hour after, the child was expelled. Upon introducing my hand along the umbilical cord, it was ascertained that hour-glass contraction was present; the placenta remaining at the fundus of the uterus. An attempt was made slowly to pass the hand through the contracted portion, but failed. Gave her Morphia Sulph. grs. ss. and permitted her to rest. Says she has felt no pain since the birth of her child. In about half an hour she had some pain with profuse hemorrhage. Used effusion of cold water over abdomen with pressure and gave her R. Morphia Acet. grs. ʒ. Acet. Lead, grs. iii. Flooding is checked. Endeavored to extract placenta but failed. In about fifteen minutes flooding returned to an alarming degree—placed pounded ice over hypogastrium, and introduced several pieces of ice into the vagina as high as os uteri—flooding restrained and hour-glass contraction relaxed so that the hand could be introduced and placenta extracted. Five minutes after the flooding returned. Passed my hand into the uterus in hope of provoking contractions, but without effect—it feels like a *wet leather bag*. Pulse very small and frequent, face and lips pallid, complains of faintness and dizziness. Fearing now her rapid dissolution unless a more successful treatment was pursued, I seized a lump of ice as large as a lemon, and carrying it through the os uteri slipped it from my hand. The effect was immediate and powerful, expelling a quantity of coagula, and contracting the uterus to its usual size and firmness; a graduated compress and bandage were then applied—pulse 120, small, weak, complains of giddiness—M. M. perfect rest in horizontal posture—pulverized opii. grs. iii immediately after rest—Panada with Brandy. Saw her four hours after—has slept some—no return of "wasting"—feels comfortable—pulse 100, soft, full—womb well contracted—no pain on pressure.

17th. Feels well—slept well last night—pulse 90, weak—likes her Panada—no pain or tenderness over abdomen—lochia not more free than usual—M. M. let her rest.

18th. doing well—22d thinks she can sit up—forbid it and discharged her, well.

CASE II. Nov. 7th, 1847. Called in haste to see Mrs. B.; found a German woman attending her as midwife—the child has been

born about an hour—placenta not delivered, but she is flooding profusely, which alarmed the midwife—removed the placenta and gave Morphia grs. ss.—friction with pressure over uterus—sent for ice—hemorrhage somewhat less—her face is blanched and anxious—pulse very frequent—passed a lump of ice as large as a walnut *into the uterus* which was followed by expulsion of coagula and firm contraction—repeated Morphia gr.  $\frac{1}{4}$  and left her in care of midwife. She had no return of hemorrhage and subsequently did well.

CASE III. Called in consultation with Dr. W. of M., to see Mrs. M., a large, fleshy woman, who has had miscarriages at the third month of utero-gestation. The foetus has been thrown off for several hours, but placenta retained—frightful hemorrhage supervened, during which she has twice fainted while in the horizontal posture—the placenta can be felt through the os uteri with the point of the fore-finger—sent for ice, and during the absence of the messenger, endeavored to extract the placenta with Dewees' Placental Hook, but failed. Dr. W. had previously used Morphia, Acetate Lead, cold applications, etc., but the flooding continued, though in a more moderate degree. From her general appearance, coldness of surface, feeble pulse, etc., she must soon sink, if not quickly relieved. At this juncture the ice came, and we prepared a crystal about the size of the index finger, and passed it through the os into the cavity of the uterus, as far as possible, and allowed it to melt; the flooding ceased and did not return again, although the placenta was not thrown off for 30 hours afterward. She recovered.

CASE IV. April 22d, 1849. Mrs. O., after a natural and easy labor was delivered of a second child—placenta followed in 15 minutes, bandaged her and left her doing well.

May 30th, called to her in haste—says she was taken "unwell" yesterday,—the discharge growing more profuse ever since—(there is a case of cholera in the next room and she is badly frightened)—her bed is now saturated with blood, and she is flooding rapidly—os uteri easily admits the fore-finger, and is soft and dilatable. Gave her Acet. and Opium, applied douche of cold water, ordered ice and used the plug—hemorrhage still profuse—complains of giddiness and singing in the ear, pulse very frequent and feeble—face blanched—re-applied cold douche but without effect—her husband, after considerable delay brought the ice—removed the plug which was followed by a considerable gush of blood—introduced into the uterus several pieces of ice the size of a chestnut—the effect of stopping the flooding was instantaneous. May 31st. Has had no occurrence of hemorrhage since the use of the ice. June 1st. The discharge from the uterus scarcely stains her cloth. She recovered.

We hope the above detail is sufficient to give an idea of its application; we have never tried it in a case of Placenta Prævia. As

to being "something new" we do not know nor care: if by making the practice more generally known through the pages of your valuable journal, we are instrumental in saving one poor woman from death by Uterine Hemorrhage, we are fully compensated.—[*Cincinnati Medical Observer*.

1. *Convulsions in Children considered in an Ætiological Point of View*. 2. *Whooping-Cough*. Translated from the French, by M. MORTON DOWLER, M. D., New Orleans. (*L'Union Médicale*, July 22, 1856. *Journal für Kinderkrankheiten*, 1856, et *Annales Médicales de Flandre occid.*, Juillet, 1856.

I. Convulsions, it is known, are amongst the most frequent symptoms of the morbid affections of infancy. M. Tilner, of St. Petersburg, has made the different conditions by which convulsions are produced, a subject of special study, the chief of which he has found to be the following:

1. Convulsions proceeding from a morbid condition of the nervous system. In this category must be included all of the organic modifications of the brain—as congestion, inflammation and its consequences, softening, foreign bodies, exostoses, etc. These are the most frequent causes of the convulsive affections of infancy, and have little that is favorable in the prognosis. Most of these affections, it is true, can only be considered as secondary, and as proceeding from a dyscrasia originating in derangements of the digestive organs, or from functional anomalies presenting themselves under the form hyperæmia, and serous effusions. The convulsive phenomena which these causes provoke, carry with them the character of legitimate cerebral convulsions, are either tonic or clonic in their character; but always accompanied with a loss of consciousness more or less marked, and in these diseases present themselves as a precursor of death—and they come on quickly, and sometimes periodically. The cerebral affection may extend itself to the spinal marrow, and then tetanic convulsions show themselves.

2. Convulsions which proceed from a pathological condition of the blood. The causes are: *a*, by toxicosis, from medicines and poisons, such as narcotics, directly producing cerebral convulsions, nux vomica, and strychnia, giving rise to tetanic symptoms, which have their starting point in the spinal marrow; *b*, by toxicosis, from the maternal milk, vitiated by the use of spirituous liquors, or by violent mental emotions; *c*, by modification of the blood in acute exanthemata. This cause often produces convulsions before the eruption of the exanthem, and convulsions may also occur before the accession of fever in intermittents; *d*, by sanguineous modification in phlebitis, and especially in suppurative inflamma-

tion of the umbilical vessels, which, as is well known, may cause tetanic convulsive symptoms.

3. Convulsions take their origin in a morbid condition of the digestive organs. These are the most common kind of convulsions—and this we might readily anticipate, from the improper alimentation which we witness amongst both the rich and the poor. This cause becomes especially powerful at certain periods of infancy, such as those of dentition and weaning, and in the presence of worms in the intestinal canal.

4. Convulsions arise from certain conditions of the organs of respiration; such as those which supervene in the latter stage of bronchitis and pneumonia, and they are, as is well known, often the result of whooping-cough and laryngismus stridulus.

5. Convulsions accompany diseases of the urinary organs, and we may here specially note the eclamptic symptoms which manifest themselves in children attacked with albuminuria.

6. Convulsions proceed from a morbid condition of the genital organs. The writer recalls to mind a case of convulsions, in a boy four years old, in consequence of the retention of a testicle in the inguinal canal.

7. Convulsions arise from diseases of the osseous system. Amongst these may be named rachitic malformation of the cranium.

In view of this ætiological tableau of the convulsions of infancy, we may offer the following reflections: The convulsions called cerebral, are amongst the most frequent of the affections of infancy. Nevertheless, the primitive cerebral affections are very rare in children. The convulsive manifestations are more often the consequence of the extension of other acute and chronic diseases which manifest themselves symptomatically, producing ultimately convulsions at the precise period when the brain begins to participate in the morbid condition.

Next in the order of frequency, come convulsions from reflex action, which have their starting point in the intestinal canal, manifesting themselves ordinarily after the prolonged existence of intractable abdominal disease. Notwithstanding, the diseases of the digestive apparatus may also accompany secondary cerebral affections; which are in a condition to produce cerebral convulsions. The convulsions arising from a morbid condition of the spinal marrow, are rare, especially in the pure form; for they appear more often as subsequent phenomena to cerebral spasms, than as an affection of the brain, propagated to the spinal marrow. It is to a morbid alteration of the blood that we are to look for the most frequent cause of tetanic spasms, though the latter may have their origin under certain climatic circumstances.

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II. *On the Seat and Nature of Whooping-Cough.* (*Gazette Hebdomadaire de Médecine et de Chirurgie*, of August 22, 1856. *Academy of Sciences*.)

M. Beau has satisfied himself, by numerous anatomical investigations, that whooping-cough is an inflammation of the mucous membrane which covers the supra-glottidian region of the larynx; that is to say, the narrow zone which is situated between the superior orifice of the organ, and the superior vocal chord. When the muco-purulent product, secreted by the inflamed membrane, comes in contact with the glottis, it determines the production of suffocative symptoms, similar to those which are experienced when any one has, as is said in popular language, *swallowed the wrong way*. All at once the glottis is closed, and there results, from this, an acute crowing inspiration, which is followed by the violent paroxysmal and jerking cough, which constitutes expiration; and this cough causes the expulsion of a considerable quantity of pituitous liquid to be contemporaneously secreted. The muco-purulent matter which has come in contact with the glottis is the cause of these symptoms, and its tenacity and adhesiveness causes it to be with difficulty expelled.

The phlegmasial nature of the disease is perfectly evinced to M. Beau, from the following considerations: 1, the march of the disease, which exhibits a catarrhal period, or a state of acute supra-glottidian laryngitis, and a *nervous* period or chronic state, in which the suffocative symptoms are at once more intense and more frequent, from the fact that the secretion of muco-pus is also more free and abundant; 2, from the influence of moral causes on the paroxysms of cough provoked by the inflammatory secretion, which emotion has rendered more active; 3, from the special sensation of constriction about the throat; 4, from its contagion—for the contained, and in some sort volatile, corpuscles of the inflammatory matter, may very readily, after having been expelled in expiration, be inspired by other individuals, and deposit itself in the healthy larynx, which thus becomes inflamed by the contagious influence.—*New Orleans Med. & Surg. Journal*.

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*On Nux Vomica in Constipation.* By J. H. HOUGHTON, Esq., Dudley.

[We are constantly consulted by patients who tell us that they hardly ever have their bowels moved without taking medicine. They have generally tried every kind which we can recommend, and the only consolation we can give them is, that they must ring the changes and increase the doses. The effect of this is often only to aggravate the mischief and hasten on some of the thousand and one ill consequences which we may expect from such a state of affairs. As the result of much experience, Mr. Houghton says



that in *nux vomica* we have a remedy capable of relieving many cases of this nature, of which he gives the following:—]

CASE 1. December 4th. Emma Gibbs, aged 29, came under my care at the Dispensary on October 3rd, suffering from an attack of congestion of the uterus and vagina, which yielded to local depletion, rest, baths, &c. She is naturally of a delicate frame and constitution, and was left very much debilitated by the attack. She got relief to her debility by taking quinine and iron; but during the whole of the time her bowels were unmanageable and obstinately costive. To relieve this, she has taken, and had given to her, castor oil, senna mixture, pills, and, last of all, pills containing two parts of colocynth and one of henbane. Of these, at first, she took two with relief; then three became necessary, and then four; she then took four at night, and followed it by castor oil in the morning, and thus obtained a motion once in two or three days, with much pain and trouble. On the 13th of November I gave her twelve pills, consisting of 3ss of henbane, ʒj of compound extract of colocynth, and gr. iij of extract of *nux vomica*, and desired her to take one every night, and to continue her tonics as usual. From that time to the present (three weeks) she has taken one pill every night, and had one comfortable motion every morning, without the aid of any other aperient, and her health has much improved.

CASE 2. Sarah Silvester, aged 35, applied to the Dispensary on December 16th, suffering from a severe attack of gastrodynia, attended by some derangement of the uterus. I extract the following from my notes:—Tongue furred, yellow, indented by the teeth, moist. Appetite bad; violent pain after eating, worse at times; frequent regurgitation of food, sometimes vomiting; sometimes she is compelled to produce vomiting before she can get relief after eating. Bowels habitually costive, and very unmanageable. Her habit is to take medicine twice a week, after which she has two or three stools, and then the bowels do not act again till she again takes medicine. She says she has taken "all sorts of medicine," including many quack pills, for the relief of her bowels, but only with temporary benefit, the bowels returning to their inactive state. She had bismuth three times a day, and the pill before named every night.

December 19th. One motion daily, with perfect comfort; she has not been so comfortable in her bowels for years. Gastrodynia and vomiting much relieved.

January 16th (thirty-two days). She has taken one pill every night, and had one motion every day with comfort. The pills have never missed. Her stomach symptoms are relieved.

February 13th. She was at the Dispensary to-day. She has taken one pill every night, now two months, and it has never failed.

Authorities are very silent on the peculiar property of the *nux vomica* which I am now discussing. The last edition of "The

Pharmacopœia Londinensis" dismisses the whole matter in these laconic words: "Use—in some cases of paralysis."

Pereira does not allude to it, though he speaks of the efficacy of the drug in "dyspepsia, pyrosis, and some forms of dysentery."

Dr. Copland, whose mind seems to have embraced almost every thing in medical science, says, "In cases apparently depending on deficient tone of the muscular coat of the large bowels, and imperfect propelling power of the upper part of the rectum, I have seen benefit from combining the extract of nux vomica with the pilula aloes c. myrrha or compound extract of colocynth."

Dr. Neligan, in his excellent treatise 'On the Uses and Modes of Administration of Medicines,' observes: "I have used the extract of nux vomica with much advantage, as an addition to purgatives in constipation depending on want of tone in the muscular coat of the large intestines, one of the most frequent causes of this state in females, and one which is distinctly characterised by great secretion of flatus, and colicky pains which accompany it."

So far as I have been able to learn, we are indebted to Magendie for the first suggestions on the powers of nux vomica. In 1845, Dr. Tessier, of Lyons, published a paper which was quoted in 'The Lancet,' and in which he says that "he considers it particularly indicated in cases where there is reason to suspect general want of tone in the bowels, as in paralytic and old persons, or where we suspect want of tone of the muscular coat, in consequence of great and long-continued distension; or, in short, where the constipation can be referred to an undue secretion of gas, which in itself, by causing distension of the bowels, diminishes their contractile power."

In the Journal of this association for May, 1848, is an article by Mr. Boulton, of Bath, on the employment of nux vomica in habitual constipation, in which he observes: "I first tried the extract alone, in half grain doses, two or three times a day, and was disappointed with the result. I was then lead to use the extract in combination with aloes, rhubarb and scammony, and was surprised at the result." Mr. Boulton seems to think that it has the power of increasing the action of other purgatives; and he says: "Generally speaking, a pill containing three quarters of a grain of Barbadoes aloes, three-quarters of a grain of extract of rhubarb, and half a grain of extract of nux vomica, taken at bed time, will produce one or two evacuations the next morning." And he continues: "I have prescribed the pill already mentioned for months together, and at the end of that time the effect has been produced as certainly as at first, and no bad consequence has arisen: on the contrary, I think it will be found that, when the medicine is discontinued, the tendency to costiveness will be found to be diminished."

The correspondent of 'The Medical Gazette,' November 10th, 1855, in his Notes on Hospital Therapeutics, has the following admirable remarks on the subject: "Among the conditions over

which nux vomica, and its active principle, strychnia, possess most useful powers, is that of habitual constipation from muscular atony of the intestinal tube. At the City Hospital for Diseases of the Chest, we observe that Dr. Peacock and Dr. Andrew Clark are both in the habit of frequently resorting to it for this purpose. It is generally given in combination with the compound rhubarb pill, and in doses of the extract of from one-sixth to one-half a grain. Of itself it *can scarcely be deemed an aperient*; that is, it does not so much excite peristaltic action as supply tone to the weakened muscular coat, by which it is enabled to reply efficiently to other irritants. Hence the need of combination with aloes, rhubarb, or some similar drug."

Dr. Peacock has mentioned to us a case in which a man of feeble intellect and torpid nervous system generally, had derived great benefit from its employment. At first, the bowels were obstinately costive, and lavements produced no action; but since the use of nux vomica they have so far increased in power and susceptibility that simple injections are quite sufficient to procure all the action that is necessary.

With the observations quoted I generally concur, but specially with those of Mr. Boulton and of the correspondent of the "Medical Gazette."

From the facts and opinions adduced I think we may safely infer—

1. That in the nux vomica we have a new agent in the treatment of constipation: not a purgative or aperient, but a substance which, added to very minute doses of various purgatives and aperients, forms a kind of *tertium quid*, which combines the advantages of purgatives without the disadvantages, which does not leave the bowels debilitated and indisposed to act after its operation, but which, on the contrary, imparts tone, rendering their action more certain.

2. That the agent does not lose its power by continued use.

3. That it is a perfectly safe remedy when used in the mode suggested.

4. That it is not an accumulative medicine.—[*Assoc. Med. Jour.*

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*On Hepatic Dropsy.* By Dr. G. BURROWS, F.R.S., Physician to St. Bartholomew's Hospital.

[In a clinical lecture on this subject, Dr. Burrows first noticed the symptoms which most commonly attend these cases. They may be briefly mentioned, as, a swollen prominent abdomen, distinct fluctuation, sallow complexion, slightly jaundiced conjunctiva, pain and tenderness in the right hypochondrium, hard mass projecting below the ribs towards the umbilicus, high-coloured scanty urine, slight fever. Most frequently these symptoms will

have been produced by intemperate habits, which generally bring on cirrhosis of the liver.]

The treatment of dropsy is, at all times, confessedly difficult; but according to my experience, these cases of hepatic dropsy are not so intractable as they are represented to be, in some modern treatises on diseases of the liver.

The first measure to be adopted will depend greatly upon the duration of the complaint. If the patient complain of pain in the right hypochondrium, or if there be tenderness there on pressure, together with febrile excitement, and the strength of the pulse will permit, I recommend you to resort to local depletion. A few ounces of blood may be taken by the cupping glasses or by leeches, from the region of the liver, and this depletion should soon be followed by the application of one or more blisters in the same region. In many cases the symptoms hardly call for vascular depletion, and we commence the local treatment by the application of a blister.

2ndly. Evacuate the intestines by a freely acting purgative, and repeat this once or twice in the week; this evacuation affords relief, and, I think, is less distressing to the patient, and less irritating to the alimentary canal, than the daily use of less active aperients.

3rdly. Having premised these measures, I advise you to lose no further time in resorting to the internal and external use of mercury, not in such doses as to affect the system rapidly, and as would be proper in cases of acute hepatitis, but very gradually.

I usually prescribe the *pil. hydrarg. gr. iv., cum pulv. scillæ gr. j.*, nocte maneat, and find this quite sufficient for the purpose. But then, as soon as the blistered surfaces will permit, I order mercurial friction over the abdomen twice in twenty-four hours, and here I prefer the stimulating effects of the *lin. hydrarg.* to the simple inunction with the *ung. hydrarg.* According to my experience, there is no remedy so powerful in exciting the absorption of the products of inflammation within the abdomen or of fluid from the peritoneum, or of stimulating the liver to increased secretion, or the intestines to more energetic peristaltic action, as mercurial frictions over the abdomen. This remedy is not only, in my hands, most efficacious in the treatment of ascites arising from chronic hepatitis, but also of inflammatory effusions within the abdomen; and likewise in obstinate constipation, sometimes erroneously supposed to depend upon mechanical obstruction of the bowels. I advise you to place confidence in these means in the treatment of ascites depending on cirrhosis; but remember it will be necessary to sustain the mercurial action for several weeks. It may be necessary to suspend the mercurial friction occasionally, and then, if any tenderness be detected in the epigastrium or hypochondrium, a blister may be applied there.

4thly. Simultaneously with this use of mercurials, you may

employ diuretics freely, if careful analysis assures you the urine is free from albumen. Some writers of high repute upon diseases of the liver speak disparagingly or doubtingly of the efficacy of diuretics in this form of dropsy, or of the ability to reduce ascites by the use of diuretics. This latter class of remedies are notoriously uncertain in their operation, but nevertheless, I have found them far from useless in the treatment of ascites, especially where they have been combined with the remedies already enumerated. The diuretics I prefer are the salts of potash combined with sp. æth. nit. and sp. juniperi comp. I generally combine two or more of the following salts of potash in varying proportions—the potash bicarb., potassæ acetat., potassæ tartras, potassæ nitras, and potassæ iodid. When this plan of treatment has not a sensible effect in diminishing the ascites in the course of three weeks or a month, I should recommend you to resort to paracentesis abdominis at once, and not wait until abdominal distension has become enormous and the different internal organs almost paralysed in their functions by the long-continued pressure of the effused fluid.

Many advantages may be derived from one operation of tapping, which will not follow upon its repetition; indeed, the frequent withdrawal of the fluid by tapping causes much exhaustion, and may be followed by fatal peritonitis. The first removal of the fluid generally affords great temporary relief to the patient, but other advantages may be expected from the operation. If the operator's hand be carefully passed over the right side of the abdomen, when it is emptied of the fluid, he may ascertain with more exactness the real condition of the liver, whether it be enlarged or small, or retracted; whether its upper surface be smooth or nodulated by deposits in its substance. Such information may encourage a persistence in former treatment, or may dissuade from the use of all further exhausting remedies. Moreover, it not uncommonly happens that, while the abdomen is enormously distended, diuretics and purgatives have little or no effect; but that, when the internal pressure is removed, the kidneys and bowels begin to evince their susceptibility to the influence of remedies previously administered with no success.

Lastly, I may warn you, that patients laboring under this form of dropsy have generally been accustomed to intemperate habits, and will not bear a very low diet. A moderate quantity of dry nutritious food is better digested than slops, and you will find the nervous system and the flatulent stomach require a small amount of some stimulant daily.—[*Med. Times and Gazette.*]

### *Displacements of the Womb.*

It is our impression that there is not a sufficient recognizance of the uterus as a "floating" body, or rather as a body whose mechanical conditions of equilibrium make its support more nearly

analogous to that than to any other mode of support. The most considerable solid support of the uterus is the vagina. These two conditions lead to an easy understanding of many phenomena of the minor motions of the uterus, called mis- or displacement. The destruction of the vaginal support by relaxation (sometimes a sort of paralysis) of the tube, often accompanied by a similar condition of the rectum, leads to the most complete displacements of the womb itself healthy,—leads also to all the ordinary symptoms of uterine ailment in the most aggravated form, and curable only on condition of curing the vagina. Again, enlargement, and consequently increased weight, of any part of the uterus, leads to sinking of it. Enlargement of the cervix leads to depression of the organ. Enlargement of the body, causing top-heaviness, leads to retro- or ante-version, or flexion. It is almost certain, that the ligaments of the uterus have almost no function as ligaments, but quite the reverse, and that in those cases of displacement, where symptoms are ascribed to dragging on them, there is no such dragging at all, the uterus having free motions afforded to it by these ligaments, which are not to be put on the stretch by any ordinary misplacement. It must also be remembered, in regard to uterine flexions, that the organ is sometimes so softened, as not to be capable of bearing its own weight—a circumstance sometimes connected with leucorrhœa and painful symptoms. These considerations we could with pleasure follow out to much greater length. We shall only say, that their comprehension is a great object to all obstetricians, for as surely as they attain to a correct appreciation of them, so will they acquire confidence and skill in prescribing for or advising the sufferers from them.—[*Edinburgh Med. Jour.*

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*On the Ligation of Arteries.* By T. P. GIBBONS, M. D.

The danger of secondary hemorrhage is well known to be one of the great drawbacks to the ligation of the large and deep-seated arteries. This is particularly true with regard to the femoral artery, owing to the number of its collateral branches. Indeed, so many unfortunate results, from this cause, have occurred in the ligation of this vessel, that some surgeons prefer, rather than resort to it, in certain cases, to amputate the limb.

The method usually recommended for the performance of ligation, is to cut down upon the vessel and open the sheath, without disturbing the tissues more than just sufficient to carry the aneurismal needle, armed with the ligature, around it. By this plan of procedure, it is contended, that the danger of extensive sloughing is avoided. This is unquestionably true. But how is the danger consequent upon the application of the ligature immediately below a large collateral branch, to be obviated by such a process?

Of all the animal tissues, that of arteries is least liable to slough;

therefore, taking this fact in consideration, it appears a fair inference that by exposing the artery as much as may be necessary in the method for applying the ligature, presently to be described, the danger of secondary hemorrhage is, to a considerable extent, lessened.

Some two years ago, I witnessed the operation of the ligature of the femoral artery, for an extensive osseous aneurism in the head of the fibula. The case progressed favorably, the ligature came away at the end of six weeks, and the wound closed. The operation, so far as the cure of the aneurism is concerned, was successful. The man subsequently died from an attack of delirium tremens, and an opportunity was afforded of examining the parts. The ligature had been applied midway between two collateral branches, about an inch and a quarter apart. An organized plug, upon each side of the ligature, had produced complete obliteration of the calibre of the vessel.

The peculiar plan of the operation was as follows:—The artery was exposed in its sheath, to the extent of half an inch; a grooved director was carried *obliquely* under it, and raised so as to allow the ends of the instrument to rest upon the edges of the wound; the director was then brought round at right angles to the course of the vessels, and an eyed probe, armed with a ligature, carried along the groove. The artery was tied at this point.

The mechanism of the process is very simple. When the director is carried obliquely under the vessel, as the primary step, and subsequently moved round at right angles with it, it will be observed that the position which the instrument holds beneath the artery, is such as to insure the application of the ligature midway between the two nearest points of resistance; which points usually to the connection of the collateral branches. The reason for its occupying this particular position is sufficiently evident: in moving it from a branch the resistance becomes less, while in moving towards one, the resistance is of course increased; the consequence is, that the director, when placed at right angles with and under the vessel, naturally assumes a position where the two forces act equally, that is, equidistant from the two points of resistance.

That the danger of destroying the vitality of an artery, is not so great as is usually supposed, may be inferred from the following case. Some time ago, I had occasion to cut down upon, and tie the radial artery for secondary hemorrhage, which occurred from a wound at the wrist. The artery was exposed and separated from its sheath for the distance of an inch, and the ligature applied at the distal extremity of the wound. Everything progressed favorably, the ligature came away about the usual time, the wound healed kindly, and there was no cause to regret having isolated the vessel from its cellular attachments. We see the same indisposition to slough on the part of the arteries frequently mani-

fested when they are exposed in deep ulcerating wounds, where the process of destruction has involved almost every structure in the neighborhood, including the cellular tissue immediately around them; and yet, under such adverse circumstances, their integrity is perfectly preserved. If then, nature has endowed these vessels with such remarkable powers of resistance, why should surgeons hesitate to act on the suggestion so plainly thrown out, and reap the obvious advantage which isolation of the artery, and separation from its vascular conduits, will afford them in the operation of ligation for aneurism?—[*N. A. Medico-Chirurg. Rev.*

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*On Irregular Contraction of the Uterus.* By DR. CHANNING.

Dr. Channing observes, that he never now meets with the hour-glass contractions he supposed to occur in his earlier practice. The following is his account of the nature and cause of these irregular contractions. "In these cases referred to, the following facts have been observed: They have most generally occurred in first labors. Everything has proceeded naturally, it may be, through all its stages. The after-birth has been expelled, and the patient may have been arranged in her bed. Sometimes, however, before this, pain may have been complained of. This increases until it amounts to agony, with expulsive efforts. The abdomen is examined externally. In about its middle, or higher, a hard ball-like tumor is felt, very sensitive, and easily distinguished from everything about it. Below this the abdomen feels soft, and bears pressure without any complaint. Not a sign of hemorrhage is present. We think of after-pains and of their accidental exaggerations. But it is a first labor—a perfectly natural one—and after-pains are rare under such circumstances. We examine per vaginam. Severe suffering is complained of. We have scarcely entered it when a firm obstruction is encountered. We proceed along one of its sides, and discover a very large coagulum. We go on, and at length feel the firm, contracted portion of the womb above. The open hand is now passed above the coagulum, and slowly presses it downwards and out. Relief is instantaneous. Slowly the hard tumor descends, under regular but insensible contraction, and gets its natural place above the symphysis. Rarely is relief expressed so completely as after this operation; not even when the head is passing the external organs. These cases strikingly resemble each other, and when once seen, they will always afterwards be easily recognized."

This condition may be confounded with retained placenta, inverted uterus, severe after-pains, and internal hemorrhage. Of the first of these the author gives instances, and the characters of inversion of the uterus are sufficiently obvious to prevent error. After-pains do not usually follow first labors, and when present



in severity, they probably depend on irregular contraction, with retention of coagula in the uncontracted portion; while, in other cases, when retention of urine has been present, the uterus takes on pseudo-expulsive action. The internal hemorrhage met with in this case differs from that usually so designated. Thus there is sudden and severe pain, and faintness is very rare, and rather due to prior exhaustion than to the loss of blood, which is much less than in ordinary hemorrhage. There is not the enlargement of the abdomen, and it has not the same firmness, except at the spots, where the contraction exists, where, indeed, it is much firmer. Elsewhere it is soft and is not tumid. The flow is slight at first, and the blood coagulates as it takes place. It is forced down into a solid mass through the dilated os into the vagina, becoming firmer and firmer, until at last it gives rise to strong painful contractions, for the purpose of obtaining its expulsion. The diagnosis is still further aided by the perfect relief that follows the removal of the coagulum. In none of the cases has secondary hemorrhage, so common in ordinary hemorrhage, been met with; and there is here a feeling of safety which does not attach to ordinary cases.

[*Boston Journal*, and *Med. Times and Gaz.*

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*On a Singular Species of Neuropathy, the Barking Mania.* By M. BOSREDON.

This singular affection, the history of which is lost in the darkness of the middle ages, appears to have originated in Brittany. Dax, a town of Landes, also furnishes some examples. The phenomenon, which is tolerably rare, and the nature of which is little known to the medical world, reappears at more or less distant intervals: it is characterized by a piercing, convulsive cry, occasionally musical, imitating at one time the crowing of a cock or the cry of a peafowl, at another the bleating of sheep, the mewling of a cat, or the yelping of dogs. It is this character which has caused the name of *barkers* to be given to women labouring under this affection. As medicine has always been unable to combat this extraordinary ailment, the church has had recourse to exorcisms and pilgrimages, but these various expedients have rarely been crowned with success. Chance has just brought under my notice a case of this kind, which, under medical treatment, has resulted in recovery.

Jean Roux, aged 11 years, of a nervous and sanguine temperament, youngest son of a vine-dresser, who died of phthisis three years before his son's illness, living with his mother at Sainte-Croix-du-Mont, (Gironde) was attacked, without any known cause, on the 1st February, 1846, with an apyrexial cough, tolerably severe during the day, accompanied with a slight mucous expectoration and headache: he was undisturbed during the night.

These symptoms had yielded to suitable treatment, when, on

the 15<sup>th</sup> of the same month, he began to give utterance to a cry like that of a fowl whose œsophagus was obstructed, and which lasted for seven or eight seconds. These attacks, which were accompanied with a painful and jerking respiration, were repeated eight or ten times during the day. On the approach of night they ceased until seven o'clock in the morning, when they were renewed. Sulphate of quina, chloroform internally and externally, various purgatives, cold baths, and cold immersions, were tried in vain.

These attacks always following the same course, intermitting at night, became more intense during the day, and fatigued the patient more, without, however, proving very injurious to his health.

Despairing of success by the means above enumerated, I employed a mixture of lime-water, four ounces; acid valeriate of atropine, half a milligramme [ $\frac{1}{1000}$  of a grain!!]; simple syrup one ounce. To be taken in spoonfuls during the twenty-four hours.

This mixture produced strong dilatation of the pupils, hallucination, incoherence of ideas; in a word, a decided effect on the whole nervous system, especially its cerebral portion.

In the course of the following twenty-four hours, the system had returned to its normal condition; the disease had completely yielded.

Eight days later, under the influence of a slight impression, this young boy uttered two cries tolerably like the above; to prevent their return I advised, on the 21<sup>st</sup> of August, the use of the same mixture; but the patient took only a few spoonfuls, on account of the supervention of nervous symptoms.

He has since had no return of the affection, and his health has continued good.

What are the nature and seat of this disease? This I shall not undertake to decide. However, it is to the acid valeriate of atropine that this young patient owes his recovery. It was as a powerful modifier of the nervous system, that I determined to employ it.—[*Gazette Médicale de Paris—Dublin Med. Press.*]

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*Death after Operation with the Ecraseur.*—By L. E. DESMOND, Honorary Surgeon to the Liverpool Dispensary.

The *écraseur* having first been introduced into Liverpool by the medical staff of this dispensary, it was my lot to assist at almost all the operations hitherto performed with it; and having witnessed their successful issue, I had no hesitation in employing it in this case. Five other surgeons, who were with me at the time, were satisfied as to its fitness, and its apparent safety from hemorrhage.

Cath. Egan, aged 41, presented herself at the Northern Dispensary, having suffered great pain, for a length of time, from two

hæmorrhoids just within the anus, one at each side, and a large prolapsed portion of villous mucous membrane anteriorly, from an open vessel in the centre of which she had on each occasion of her going to stool lost considerable quantities of blood; indeed, it sometimes flowed from her as she stood upright, the bleeding point often being outside the anus. She was weak, anæmic, sallow, and altogether cachectic, and was about three and a half months pregnant. I removed first the two hæmorrhoids, occupying three and a quarter and four and a half minutes respectively in their strangulation, and then the prolapsed mucous membrane, of about the size of a Spanish nut; including, of course, the bleeding point, an assistant's finger in the vagina making this part protrude. As this was the largest portion, and looked red and vascular, I spent six and a half minutes in its strangulation. No hæmorrhage followed their removal, and the wounds remained closed, with their edges pinched together, as is usual after using this instrument. She was visited in one hour and a half after the operation, when it was found that having a desire to go to stool, she had sat up and passed a clot of about four ounces. There appeared no bleeding now. A grain and a half of opium was given, the parts kept cool and strict quiet enjoined. 8, P.M. No return of the hæmorrhage, nor any further desire to empty the rectum. Another grain and a half of opium was given, and she was left for the night, which she passed without sleep, being very restless, and getting out of bed two or three times for a drink. She parted with no more blood till nine the next morning, when she passed about twenty ounces of dark clot. She was visited soon afterwards, and twenty drops of Battley's solution, with half a drachm of chloric ether, were given, and brandy and nourishment ordered at intervals. At 2, P.M., she had had no further hæmorrhage; and on examining the state of the rectum, with a finger in the vagina, it was found to be quite empty. She had had some vomiting, was restless, and the pulse 110. Stimulants and nourishment to be continued, with ten-drop doses of Battley's solution and ether, and to be watched. At 9, P.M., her condition was that of great exhaustion, with some stupor; pulse 130. She was evidently sinking, and she died without any further bleeding on the 7th, thirty-seven hours after the operation. No post-mortem was allowed.—[*Association Journal*.

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*On a Cause of Vomiting in Pregnancy.* By M. BRIAU.

The conclusions arising from the following case are—First, that unmanageable vomitings may be caused by the confinement of the gravid uterus in the hollow of the sacrum; and secondly, that these vomitings may immediately cease upon the correction of this irregular condition. M. Briaud mentions that several cases of the kind have occurred in the practice of M. Moreau.

CASE.—Madame X., æt. 25, of lymphatic temperament, well formed, and

healthy. Six years ago she was confined of her first child, and everything went on perfectly well. Three years afterwards she was confined again, and on this occasion also, she went on well, with the exception of some feelings of malaise and vomiting during the first months. A few weeks afterwards, however, she was gently startled by an accident, and from this time she suffered more or less from leucorrhœal symptoms. Madame X. again became pregnant in March, 1856. About the middle of the month following, she began to vomit, and these vomitings progressively became more and more unmanageable until nothing would remain on the stomach. Throughout the whole month of May she was affected with severe gastralgia, with constipation and continual thirst. Then she began to suffer from frequent cramps and convulsive movements, with sleeplessness and great depression of spirits.

M. Briau was called to the case on the 2d of May, and all the usual means were tried without success. Then an experiment in homœopathy was tried, and with the same result. M. Briau was recalled on the 2d of June, and on this occasion he suspected that the vomiting might depend upon some uterine displacement. He did this partly on account of the continuance of the leucorrhœal symptoms, and partly from the fact that the uterus could not be felt in the proper position. Two days later, M. Moreau was called in consultation, and an examination made, when it was found that the uterus was in a state of incomplete retroversion, as well as in a state of incarceration in the hollow of the sacrum. This malposition was corrected without causing any pain to the patient, and immediately her former sufferings began to subside. On the same day the vomitings ceased, and some food remained on the stomach. On the night following she slept comfortably. In less than forty-eight hours the belly acquired the usual development belonging to the third month of pregnancy; and, in a word, the patient recovered rapidly, without another bad symptom.

[*Gaz. de Hebdom. et Méd. et Chir.*—*Ranking's Abstract.*

## EDITORIAL AND MISCELLANEOUS.

**MEDICAL SOCIETY OF THE STATE OF GEORGIA.**—"At a late hour, on motion, the Society adjourned to meet again at 11 o'clock, A.M., on the second Wednesday in April, 1857, in the City of Augusta."

"F. C. ELLISON, Recording Secretary pro tem.

"MACON, April 12th, 1856."

We again call the attention of our readers to the approaching meeting of this Society. Every physician in the State should consider himself a member of this body, and we hope, for the interests of the Profession, that all will make an effort to attend. The Society, wishing to remove all obstacle, however trivial, to full attendance, have judiciously arranged to have its affairs managed without the expenditure of money, [their transactions are published in this journal] and, therefore, even the initiation fee

has been abolished, leaving no let or hindrance (except such as pertain to character,) to the co-operation of all, in the advancement of medical science in our State.

The approaching meeting is one which should be fully attended, from the fact, that the American Medical Association—the National Medical Congress of our Country—will, at its next meeting, in May, convene at a point (Nashville, Tenn.,) accessible to all who desire to attend. It may be many years before the same opportunity will again offer. We hope, therefore, to see a large attendance at the next meeting of our State Society, that this body may be entitled to a large delegation to the National meeting.

This august assemblage, made up of elements from every portion of our vast country, even now, exercises an influence in the medical world at large, compared with which, none other, in the same time, has, elsewhere, acquired. We, of the Profession in Georgia, are expected by our Northern brethren, to be well represented in our own South: they will have come far to meet us, crossing *many States*, let us not fail to cross the *line between two States* to meet them.

“CALESCIMUS.”—The following lines, evidently from the pen of one, who has burned with “Promethean fire,” as well as with the *calor mordax* of fever, are hardly out of place, anywhere; certainly not, in a Southern Medical Journal. They strongly remind us of a production, of that most genial, and yet most touching and melancholy, of all modern poets, Thomas Hood, viz., “The Song of the Shirt;” the rythm suits the description of the heart’s fevered action, even better than the wearied movements of the shirt-maker’s fingers. We consider the words, the measure, the intentionally monotonous repetitions, and the sentiment, most singularly expressive and appropriate. They come to us anonymously, but we more than half suspect the gifted source from which they emanate. If our suspicions are correct, we will here fondly express the wish, that this heart may henceforth, only “throb” in that gentleness and benevolence which have ever guided that same pen, and moved to deeds of christian love and charity, that same kind hand.

#### NERVOUS FEVER.—PULSE 135.

Burn, burn, burn;  
Fever all the day,  
Chasing my sleep at the midnight hour,  
Burning my life away.

Beat, beat, beat;  
My pulse will beat away,  
Forcing the work of a season’s length  
In its flying path to-day.  
SAND HILL, Nov. 1856.

Drink, drink, drink;  
Dream of a mountain rill,  
Starting to grasp at the cooling draught;  
Ah! I am parching still.

Throb, throb, throb;  
Bind ye my temples fast,  
And press the weary eye-lids down  
Till the storm of fire has past.

*An Address on the Life and Character of Robert M. Porter, M.D., late Professor of Anatomy in the University of Nashville.* By JOHN BERRIEN LINDSLEY, Chancellor of the University.

"I think," says a living Christian writer,\* "that Mr. Carlyle has demonstrated, that a biography can be given in the compass of a review-article;" we can, with equal truth respond, that the writer of the above address has fully demonstrated the same possibility, in the smaller compass of a single lecture.

This excellent address, breathing the incense of an affectionate and bereaved heart, over the departure of a beloved and honored colleague, has been kindly forwarded to us by our friend, the author, and though our space will not allow us to give it that extended notice, which its merits richly deserve, and which our pleasure in reading it, would incline us, we can, at least, recommend it to our readers—as the portrayal of the highest style of professional character, manifested in the life of the lamented subject of the address.

In the early period of youth, in riper manhood, as the devoted and untiring student, the enthusiastic laborer in the noble cause of science, at last sacrificing, even his valuable life, upon her too cherished altar;† in every relation of life in which he is here described, we can but be warmed with admiration in contemplating a character so approximating the ideal of the true Man, the true Christian, and the true Physician.

"As a physician, the character of Dr. Porter will furnish a subject for profitable and instructive study. He combined in a high degree, those qualities and attainments which give dignity and grace to the profession, which from the remotest periods of history have procured it great honor among men, and which, so long as humanity continues subject to physical ailments, will continue to secure it a first place in the esteem and respect of society.

"He had exalted views of his profession, as to its dignity, responsibility and utility. He did not undertake either the study or the practice of medicine merely because it furnished the means of gaining a comfortable or easy livelihood, but because it gave opportunities for making extensive progress in knowledge, and doing good continually and disinterestedly to his fellow-men. It was with him as it is with all men who truly succeed in the professions called liberal. He loved his profession for its own sake, he studied it for its own sake, and practised from the same motive."

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\* Rev. Peter Bayne—The Christian, Life, Social and Individual—Preface.

† "On July 1st, 1856, he ceased to live, after an illness of six weeks, and with a perplexing complication of symptoms. The case was doubtless rendered fatal by the imbibition of a blood-poison taken into the system, May 27th, from dissecting an offensive subject, while lecturing to the summer class then assembled."—*Address*, page 18.

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*The Physician's Prescription Book* : Containing a list of terms, phrases, contractions and abbreviations used in Prescriptions, with explanatory notes, also, the grammatical construction of Prescriptions, etc.; to which is added a Key, containing the Prescriptions in an unabbreviated form, with a literal translation, intended for the use of Medical and Pharmaceutical Students. By JONATHAN PEREIRA, M.D., F.R.S. 2d American, from the 12th London edition. Pp. 202. 18mo. Philadelphia: Lindsay & Blakiston. 1857.

This useful little work has been before the Profession for over *thirty years*, and has reached its *twelfth* edition. That it should have continued its existence, "nans in gurgite vasto," and not been overwhelmed in the ocean of medical literature, during all that time, 'is enough to substantiate its merit, and render it unnecessary, for us, to do more than simply express our acquiescence in the general commendation accorded to this second American edition, of Messrs. Lindsay & Blakiston. Every body knows what the work is, and every body will find in it something useful in his emergencies.

*Medical Notes and Reflections.* By Sir HENRY HOLLAND, Bart., M.D., F.R.S., etc., etc., Fellow of the Royal College of Physicians, Physician in ordinary to the Queen, and Physician in ordinary to his Royal Highness Prince Albert. From the 3d London edit. Philadelphia, Blanchard & Lea. 1857. pp. 493, 8vo.

The above work, embodying the experience and thought of one, well entitled to be styled, "a master in our Profession," consists of a number of Philosophic and Practical Essays, published at various periods of the distinguished author's career; now collected and revised, they are submitted to the profession in a permanent form. It is *not* a systematic work on the practice of medicine; and when we say this, we think, we add to it, a great recommendation; it is a series of monographs, so arranged, as that the discussion of one subject will, as far as is practicable, be made to illustrate the others. The plan of collecting published treatises, from the journals, into a volume, and giving them careful revision, after they have been subjected to the test of several years' experience, meets with our full approbation, and we would respectfully recommend it to our cis-Atlantic friends.

Most of the American scientific literature is scattered, disjecta membra, throughout journals. Published in a fugitive and desultory manner, they, for a time, and only for a time, retain a hold upon the medical mind, but are soon appropriated, and to use a quaint expression of the Rev. Sydney Smith,\* the illustrious father-in-law† of our author, "these few strong ideas are *diluted* through an octavo volume," by some book-maker across the water, and we, the very originators of these ideas, with mouths, eyes and

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\* Elementary Sketches of Moral Philosophy.

† Vide "Memoirs of Rev. Sydney Smith, by his daughter, Lady Holland."

ears open, wonder at the cleverness of our European brethren, and deplore the drony inefficiency of American physicians—"It is not in stars, but in ourselves, that we are underlings."—If we are too proud to dilute, let us at least make a combination, however heterogeneous it may be, of strong ideas, and collect together our scattered thoughts, before time and the superior energy of others, cause them to pass out of our possession.

Sir Henry Holland's work is no dilution, but a compound of strong ideas, and his determination to brave, and not yield to, the general tendency of the day, to write a *system* of practice, speaks well for his judgment, and this, added to other acknowledged merits in his excellent work, must secure it a prominent place in the consideration of every thoughtful reader, in or out of the profession.

*The History, Diagnosis, and Treatment of the Fevers of the United States.*

By ELISHA BARTLETT, M.D., late Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons of the University of the State of New York, etc., etc. 4th edit., revised. By A. CLARK, M.D., Professor of Pathology and Practical Medicine in the College of Physicians and Surgeons of the University of the State of New York. Pp. 610, 8vo., muslin. Philadelphia: Blanchard & Lea. 1856.

This excellent monograph, on febrile diseases, has stood deservedly high since its first publication. It will be seen that it has now reached its fourth edition, under the supervision of Professor A. Clark, a gentleman, who, from the nature of his studies and pursuits, is well calculated to appreciate and discuss the many intricate and difficult questions in pathology. His annotations add much to the interest of the work, and have brought it well up to the condition of the science, as it exists, at the present day, in regard to this class of diseases. It is unnecessary to make an extended review of this work, it has already been accepted by the profession, and placed among the standard volumes of every complete medical library.

OUR LIST OF PAYMENTS.—We feel disposed to congratulate ourselves, on the exhibit made by our receipt-list for the two past months. It will compare favorably with that of any similar work in the country, and affords us much encouragement in our labors. We are not pecuniarily interested, it is true, in this list, but it is indeed pleasing to see, that such an evidence is given, that our labors are appreciated. We have been characterized "the oldest Medical Journal in the South," by one of our valued exchanges (The Nashville Journal);—in the spirit of laudable emulation, our ambition is to be at least *one of the best* and most useful in the South. Our Subscription list is large, our Contributors are many, and able too, and our Publishers are liberal, and we assure our Readers, that we will not be backward in drawing upon this liberality, whenever opportunity offers, to add to the interest and value of the work. A long list of this



kind looks respectable; we only ask our subscribers to keep up our respectability in this way, throughout the year, and we promise our most earnest endeavors to do our part in sustaining it.

*Death from Dissections.*—The statement made, in regard to the cause and nature of Dr. Porter's last illness, is based on an opinion expressed by the undersigned, who was Dr. P.'s attending physician. Its correctness is proved by the history and the symptoms of the disorder. Dr. P., on the 27th of May last, when the heat of the weather was and had been for some days extreme for the season, opened, in presence of his class of pupils, a body far advanced in putrefaction, and made it the subject of anatomical demonstration during a period of two hours. The odor emitted was so offensive that some of his audience were driven to the windows, and others without the room. On the succeeding day he was seized with a chill, followed by a fever, the malignant character of which clearly attested its extraordinary origin. One of the most remarkable of his symptoms, as most indicative of the source of his disease, was the presence, without intermission, as he himself described it, of the odor of his nostrils, and the taste in his mouth, of the effluvia of the dissecting-room, in their most offensive forms.

THOS. R. JENNINGS.

[*Prof. Lindsley's Address on the Life, &c., of Dr. Porter.*

*On the differences in the composition of Milk at different times of the day.* By Professor BÖDEKER.—The very careful analyses of Dr. Bödeker lead to the following results:

1. The quantity of fatty matter increases continually from morning until evening, and in the evening it is nearly doubled. In sixteen ounces of milk drawn in the morning the infant received three-eighths of an ounce of butter, while in the same quantity of milk drawn in the evening it received from five-eighths to three-fourths of an ounce of the same substance.

2. This augmentation in the quantity of fatty matter is accompanied by a trifling augmentation in the quantity of caseine. In sixteen ounces of milk drawn in the morning, there were three-eighths of an ounce of dry caseine; and in the same quantity drawn in the evening, about nine-twentieths of an ounce.

3. As the caseine increases in quantity the albumen diminishes, and almost in the same proportion.

4. The sugar of milk undergoes little variation. It is, however, somewhat more abundant in the morning than in the afternoon.

5. The quantity of the saline constituents of the milk remains constant.

[*Zeitsch. für rat. Med—Ranking's Abstract.*

*Electricity in Amenorrhœa.*—Dr. Sanders says, in his article on Physiological Electricity, that in those cases of amenorrhœa, where no congenital malformation exists, the application of the electric current will always be attended with success, even after the usual remedies have been tried in vain; but that it is important to combine with the electrical treatment, or to precede it by certain tonic medicines and invigorating diet and regimen. He quotes Dr. Bird as observing that, in electricity we possess the only real direct emmenagogue with which the experience of our Profession has furnished us. He has never known it fail to excite menstruation, when the

uterus was capable of performing this function. But this capability is always an important consideration. Nothing can be more absurd than to undertake the excitation of this, or any other secretion, while the state of the general health, or of the particular organ to be excited, is such as to forbid secretory action. The electric current may be sent through the uterus either from side to side through the hips, or from the sacrum to the pubes. Perhaps it would be still more effectual in cases of extreme torpor, to bring one of the wires into direct contact with the os uteri.—[*Memphis Med. Recorder*.

*Tincture of Iodine in the Vomiting of Pregnancy.* By Dr. EULENBERG, of Koblenz.—Dr. Eulenberg, of Koblenz, says that this remedy, even in very small doses, is a most efficacious agent in arresting the troublesome vomiting which so often occurs in pregnant women. He orders the tincture in a very dilute form, (Tinct. Iodin., ℥j; Spir. Vini. Rect., ℥iij; M.) and in small doses, three drops several times a day in water. The cardialgia which accompanies this morbid condition is also relieved by it. Dr. Eulenberg alleges that other sympathetic irritations, and neuroses of the nerves of the stomach, are alleviated by similar treatment. The author has not found iodide of potassium equally serviceable in the affections alluded to.—[*Preuss. Ver. Zeitung; Edinburgh Med. Jour.; Ranking's Ab.*

*On the Treatment of Cracked Nipple.* By M. LEGROUX, Physician to the Hotel Dieu, Paris.—M. Legroux proposes to cover the affected nipple with an artificial epidermis, and he thinks that the "baudruche" will answer this purpose very conveniently. This "baudruche," first pricked with a few pin-holes to allow the milk to pass through, is drawn over the nipple, and then fixed to the skin of the breast by a varnish consisting of colloidian, 30 grammes; castor oil, 50 centigrammes; and turpentine, 1 gramme 50 centigrammes. In applying this varnish, it is necessary to avoid the nipple itself, or much inconvenience and pain may be caused by the subsequent contraction of the drying film. When the infant is applied to the breast the "baudruche" is first made soft and supple by the application of a little sugar and water. With care one of these sacs may last for several days—until, in fact, the cracks may have healed.—[*Gaz. de Hebdom. de Méd. et Chirurg. Ranking's Abstract*.

*Solution of Phosphoric Acid in Typhus.* By Professor MAGNUS HUSS, of Stockholm.—Solution of phosphoric acid, two and a quarter ounces; decoction of marsh mallow, five ounces; syrup of marsh mallow, four ounces; mix—dose, from ten to fifteen drops every two hours. M. Huss recommends this solution in the first stage of typhus, whether it appear under the abdominal or petechial form, or under any form intermediate between these. The state of the tongue by no means contraindicates the use of this remedy, which always renders the course of the disease more favorable. The solution contains 25 per cent. of phosphoric acid.—[*Presse Médicale Belge, and Dublin Med. Press*.

*Remarkable Fecundity.*—In a commune near Lille, a young woman, who had on each previous occasion had twins, gave birth in her third confinement to five children, three boys and two girls. Her labor lasted forty

hours. All the children were perfectly formed but small, and two days after the birth of the last, were likely to live. Towards the end of her pregnancy the mother was affected with double vision, but since her accouchement her sight has returned to its normal state.—[*Ibid.*]

*A Child Crying in the Uterus.*—Dr. Huter of Morburg, has published a case of twin births, where the first ovum was expelled intact with the placenta. The child was noticed to breathe distinctly within the sac, and it soon cried when the membranes was a little pinched. The latter swelled up, and Dr. Huter, after hearing five or six sobs, tore the membranes. The second child presented with the vertex and the right hand; it looked dead when born, but finally breathed and cried. They were both of the male sex, and very small. In spite of the warm bath, the first child died four hours, and the second five hours, after birth.—[*Dublin Med. Press.*]

*New Ecraseurs.*—Two new forms of ecraseur are now using in London; one of a curved form, so as to reach cavities; the second, in place of the intermittent motion and unpleasant "click," is furnished with a continuous action of a very slow kind, like the spring of a common watch.—[*Ibid.*]

*Vaccination.*—J. F. Marston, Esq., Surgeon to the London Smallpox Hospital, says that he has never seen any evil results traceable to vaccination, with the exception of a single instance, in which measles occurred at the same time, and four or five examples of rather severe sore arms, arising from lymph recently taken from the cow.—[*Boston Med. & Surg. Jour.*]

DR. CARPENTER, OF LONDON.—This distinguished author has resigned the Chair of Physiology, which he has so long adorned. Physiological science has sustained a severe loss in his retirement.—[*St. Louis Med. and Surg. Jour.*]

**RATIONALE OF MUSCULAR RIGIDITY AND CONTRACTION IN PARALYSED LIMBS.**—As the process of contraction shews itself, in general, most in the upper extremity, so also it generally commences there; but now and then it will begin in the lower extremity: not unfrequently it will be met with in the upper extremity only.

The view which I have always taken (and which many of you have heard me express in passing through the wards), of the manner in which this contraction is produced, is this; at the seat of the original lesion, whether it be simply a white softening, or an apoplectic clot, or a red softening, with more or less destruction of the brain-substance, there takes place an attempt at cicatrization, more or less perfect. Attendant on this, there is a gradual shrinking or contraction of the cerebral matter, which acting on the neighboring healthy tissue, keeps up a slow and lingering irritation, which is propagated to the muscles, and excites in them a corresponding gradual contraction,\* while at the same time their nutrition becomes seriously impaired by the want of proper exercise and the general depressing influence of the lesion.—[*Todd's Clinical Lectures on Nervous System*, p. 171.]

\* The Italics are all ours.—*Edin. S. M. & S. Jour.*

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## ORIGINAL AND ECLECTIC.

### ARTICLE XII.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

#### LETTER NO. 17.

MONTGOMERY, ALA., February 16th, 1857.

*Messrs. Editors*—My last letter having been devoted chiefly to the consideration of the subject of Yellow fever in its essential character, and an endeavour to show that in that character, and in its first or early stage, it is often, if not generally, a *curable* or *abortable* disease,—it is my desire in this, to show the contingencies upon which such an issue depends, and that when, in this or other kindred affections, the typhoid, or necræmic, condition becomes fully formed and established, it is *not curable* by any known or certain process, except the gradual elimination of the specific poison, and others which may have been generated in the system, and a restoration of the blood to its normal and healthy condition. And as this process necessarily depends upon the sanative efforts of nature, and the recuperative powers and energies of the system, for its accomplishment, requiring a longer or a shorter period, according to the essential type and character of the disease, the most consummate skill and judgment of the physician is generally required to determine, how much it is his duty to perform—how

much he should leave to the efforts of nature, and what aids he may be able to lend, to hasten it.

With respect to Yellow fever, ample experience has shown that when it has passed *unchecked* into its second stage, it is no longer controllable by potent or heroic remedies; that great caution is necessary in the use of all remedies of an active or perturbing character; that nature requires an absolute state of quietness and repose for her successful operation, and that slight disturbance from officious interference is often sufficient to interrupt and suspend those operations upon which alone the safety, and often the life, of the patient depends. It is not, however, to the second stage of Yellow fever, or to other confirmed typhoid conditions or forms of disease, that these measures of caution, with respect to the use of active remedies, are confined, but they will apply as well to all those zymotic fevers which have their origin in a *blood poison*, (not nœcæmic or typhoid,) and which have a definite course to run—such as small-pox, measles, scarlet fever, &c. So far as my experience has gone, in the management of all these diseases, and conditions, the safest and most proper course to pursue, is to observe a “masterly inactivity,” and an “armed neutrality;” by which, I do not mean that we should stand idly and indifferently by, and leave everything to the operation of nature, allowing her to struggle through difficulties which art could easily overcome; but I mean, that having placed the patient in the most favorable condition for sustaining the struggle, which we are satisfied, from a knowledge of the disease, its peculiar and characteristic symptoms, and the course which it has to run, according to its essential type and character, that we have not the power to *prevent* or *arrest*. Our duty must be confined to the task of endeavoring to *conduct* it to a favorable termination, (which by judicious means we may sometimes hasten) by carefully watching its progress, and combating such symptoms, and warding off such extrinsic influences as *do not belong to the disease in its essential character*, and such as threaten to interfere with or interrupt its *regular and natural progress*. It often happens in these diseases, that *no* interference on the part of the physician is required by the exigencies of the case, beyond the task of watching their progress—especially have I found it so with respect to typhoid and scarlet fever. Yet, how few of the profession have the moral courage, in the treatment of these or other dangerous diseases, to adopt such a course, and to

withhold medicine when urged to its administration, and to prompt and vigorous action, by the fear and anxiety, and even the entreaty and remonstrance of the patient or friends, whose ignorance of professional duty and responsibility and, no less, of the nature of disease, will make no proper allowance for such a course. They expect, and require that something should be done, and the physician generally finds it an easier and more agreeable task to gratify their desires, in this respect, *by seeming to do something*, even when he *knows*, or *believes*, it to be useless, so far as the arrest and cure of the disease is concerned, (unless he deceives himself,) than it is to endeavor to convince them, that the patient would do better without his interference and his physic. I would not charge upon the profession a want of honesty of purpose in this, for it is right and proper that *all* reasonable desires of the patient should be gratified, even to the taking of physic, provided it will be attended with no danger or inconvenience; but I do say, that the administration of medicine, or other interference, merely as a professional requirement, when uncalled for by the exigencies of the case, though sanctioned by therapeutic authority, argues a weakness, and a want of independence and moral courage, to stem the tide of popular ignorance and prejudice, which comparatively few of the profession are willing, *single handed*, to encounter, not less with respect to the administration or the use of *certain* remedies, than to withholding *all* remedies, when such a course would seem to be most proper.

The truth is, that the Medical Profession has assumed too much and promised too much, and the world has thus been led to expect and require from the profession, more than it is able to perform,—hence confidence has been shaken, and even destroyed, and thus the doors have been thrown open, and every species of Charlatantry has been invited to enter. To close the doors against quackery, to restore lost confidence, and to elevate the character of the profession, it becomes the duty of every honest member of the profession, to keep in mind himself, and to let the world know, that he possesses no power of himself to *heal*—that he is but the “hand-maid” (as it were) of nature, to whose voice he is bound to listen, and whose mandates he is bound to obey, and that every act performed, or measure adopted, which is not in conformity to her suggestions, in compliance with her wants, or in obedience to her demands, is an unauthorized and unwarrantable act of assumption

and usurpation. When the world has been taught, and comes to understand this, more confidence and a better understanding will be established than now exists between the world and the profession; less action, and less meddlesome interference, will be expected, and less required, and the physician will have less to dread from the interference and the intrigues of quackery.

These remarks are not intended as a *fling* at the moral honesty of the profession, generally, nor are they dictated in a malevolent or a Pharisaical spirit, but from an experimental knowledge of the difficulties to be encountered in adopting the course which I have indicated in the treatment of a certain class of diseases—difficulties which grow out of, and are inseparable from, the general popular ignorance, as I have said before, with regard to professional duty, and professional responsibility, and of medical matters in general—an ignorance, whose baneful influence the *united efforts* of the profession only can counteract; but an ignorance, alas! which opens too wide and fruitful a field, and offers too rich a harvest, to justify the hope, even, that such an effort will ever be made. But I will forbear, as such reflections must be painful and humiliating to every one who has cultivated an attachment to, and entertains a proper regard for the honor, the dignity and the independence of his profession.

Although some of the most gratifying reflections arising from a retrospect of my professional course are derived from the favorable termination of cases of great apparent danger, which I had *refused* to interfere with, or to take out of the hands of nature—when I believed her to be the better physician in the case, and for which I claim the greater credit—yet, I must confess, that I never felt my responsibility diminished on that account, but sometimes painfully increased. Nor have I always found this the most easy mode of procedure, or free (for a time at least) from a *sacrifice* of individual interest, to which, and the allurements of popular applause, I have never willingly forfeited my independence, or compromised the honor and dignity of the profession, by a resort to any species of dissimulation or intrigue, believing that it is always more honest and creditable to endeavor to enlighten mankind, than it is to play upon and take the advantage of their ignorance and credulity. Hence I have never allowed myself to tamper with Thompsonianism, Homoeopathy, and other such abominations, for the purpose of catching the popular breeze, but my constant prayer has always been—*from all such sins good Lord deliver us.*

As, however, I am not delivering a homily on professional honesty, or the duty and obligation of physicians generally, or desire to write my own panegyric, I will bring this digression to a close, with a few remarks, by way of *caution* to my *junior* readers, of which the senior are at liberty to avail themselves of any advantages which the suggestions may offer, which is, to guard against the fallacious, though popular dogma, that "*desperate diseases require desperate remedies*," which, in consequence of its general reception, and indiscriminate application, has done, and will continue to do, an immense amount of mischief, as long as it retains a hold upon the mind of the medical profession. Whatever truth there may be in the adage in certain diseases, or a certain class of cases, in which force is required to repel force, every day's experience exposes its falsehood, when applied to those malignant and dangerous diseases which, according to their essential character, have a definite course to run, and which we have no power or means to *arrest*, and can only *conduct* to their termination, such as typhus, typhoid and scarlet fever, small-pox, measles, &c.; and more especially is it so, when these diseases assume an epidemic form. It is true, that all these diseases, *when* they require active treatment, and all others having a dangerous and malignant tendency, which require energetic treatment, require it promptly, at their commencement, while the vital powers are in their fullest and most perfect exercise, as it is the rapid failure, or giving way of those powers which constitutes their chief malignancy and danger, and which it is the main object and design of treatment to prevent. But it is a *great mistake*, in my opinion, to suppose that, because these diseases assume, at times, the character of greater malignancy, that they *become altered in their essential character*, or, in consequence, require a resort to extraordinary means, or extraordinary measures, for their proper management. For if the ordinary and appropriate means and measures fail in the early stages of these diseases, in consequence of their extraordinary malignancy, a resort to more active and powerful ones (when, from their progress, and the further loss of vital power, they become still more malignant) will generally prove a profitless, if not a hazardous experiment, not always justified or sanctioned by a sound discretion. If the question should arise, as to what constitutes a *desperate disease*, and what a *desperate remedy*, about which there *might be a difference of opinion*, I would say that *all diseases*



which tend rapidly to the destruction of human life, and over which ordinary remedies have little or no control, might be considered as *desperate*. And all remedies may be considered as *desperate*, when used on the score of their extraordinary power and activity, and in improper or immoderate quantities, and when there is a probability of their doing more harm, than there is a reasonable expectation of their doing good, or when used as a reckless experiment, or without regard to the consequences which may follow their use. Remedies are valuable and proper in proportion to the *aid* which they are able to give to the struggling efforts of nature, without reference to the degrees of their power and activity; and remedies which would be perfectly safe and proper, under one set of circumstances, would, under others, be properly considered as dangerous and *desperate*. The question, then, resolves itself into the mode or manner, and the time and circumstances of their administration, whether remedies are to be considered *desperate* or not.

There are some other lights in which this subject *might* be viewed, going to show, how mild, and even impotent or inert remedies may become *desperate* ones, by their *indirect* or *negative* operation; as, for instance, the *substitution* of a few homœopathic drops of the tinct. of phosphorus, aconite, and bryonia, in the treatment of pneumonia, for such *effective remedies as calomel, tartar-emeti, and the lancet*; or, in the carrying a *buck-eye* in the pocket, for the cure of the piles; or, a "brick in the hat," to cure the tooth-ache, or a fit of the blues,—and many other such acts of *desperation*. But it is not to such cases as these that my remarks of caution are *intended* to apply; *they* require no *buoy* or *beacon*, but *show* for themselves. But it is to those dangerous and often malignant forms of disease, which show, sometimes from their commencement, and throughout their progress, a *low* and *feeble* state of the vital forces, and all those diseases which tend rapidly to such a condition, that I would *caution* against the use of active and perturbing remedies, especially when the diseases in question have assumed an epidemic and malignant form, or the remedies, however proper under other circumstances, have failed of their proper effects, in the first or early stage of those diseases.

Yellow fever, which presents the most striking example, and furnishes the best illustration of my views, is usually characterized by a full display and exercise of the vital powers of the system in

its *first* or febrile stage, requiring, as I have urged, the necessity of *prompt* and *energetic* treatment, (even to the point of *desperation*, as some might say.) Yet, having passed uncontrolled into its *second* stage, which is equally characterized by a prostration of the vital powers, active or energetic treatment becomes as useless, and even injurious, as it was necessary and beneficial in the first stage. In such an emergency, which may very safely be pronounced as *desperate*, what course does it become the duty of the physician to pursue? He cannot, with propriety, or a reasonable hope of success, renew, or continue, a course of *active* treatment which has already failed to arrest the progress of the disease. He should not jeopard the life of his patient by tampering with physic, especially as a matter of *desperate* experiment. He cannot, or should not, *abandon* his patient in his fearful extremity. But, without suffering himself to be *forced* to action, or into the adoption of measures, which his judgment does not fully approve, he should stand firmly at his post, patiently and carefully watching the operations of nature, upon which the issue of the case mainly depends, and which it is often in his power materially to aid; and though he may not, by the use of any *known antidotes*, be able to neutralize the action of noxious and poisonous matters received into or generated in the system, he may, to a considerable extent, *counteract* their influence, by a judicious use of such remedies as are calculated to raise and sustain the prostrate energies and vital powers of the system, thus affording aid to the *depurating* and *excreting* organs in eliminating the poisonous matters from the blood, and restoring it to its normal and healthy condition. It will be perceived that the therapeutic principles which should govern the treatment of Yellow fever, according to my views, are about the same, both in its *first* and *second* stadii—with this material difference, however, that in the *first*, the object is to *preserve* the vital powers, and *prevent* the *breaking down* of the healthy constitution of the blood, which is to be accomplished by prompt and energetic measures; and that, in the *second*, the object is to *reinvigorate* the vital powers, and *restore* to the blood its normal condition, which is a slow and uncertain process, and only to be accomplished by mild and gentle measures. Such, indeed, are the principles which should govern the treatment of all those diseases which cannot be subdued or controlled by active or heroic remedies, especially those which I have before named, as well as others belonging to the zymotic class.

Having given my *general* views with regard to the treatment of Yellow fever, particularly in its first stage—for the subsequent treatment, and the best and most appropriate means for effecting the objects and the purposes indicated, I must refer the reader for more accurate and reliable information to the systematic writers, and the many valuable monographs upon the subject, my own experience having been too limited to allow me to speak with confidence, upon such matters; besides, it is out of the line of my general intentions to enter into the details of practice in this, or any other diseases, of which I may have occasion to speak.

I shall now proceed to an examination of some other typhoid diseases, and endeavor to show, that though they may all be classed under one general head, they are, nevertheless, separate and distinct in their essential, *suigeneric* character, and however closely they may simulate each other, in their general character, and the *nature* of the causes which produce them, yet the causes are *essential* and *specific* to each, and each is distinguished by its own peculiar and characteristic phenomena and symptoms.—In a previous letter, I had occasion to speak of the typhoid condition, as a *condition merely*, being the result or product of previously existing morbid actions, in diseases, *not* typhoid in their origin, and consequently not entitled to hold rank with those *diseases* which are so; yet the near relationship which exists between them, pathologically, and the importance which attaches to it as a *condition*, renders it proper that it should be included in the general family, and particularly as its further examination will probably enable us to understand better the nature of typhoid diseases generally. In order to prevent any misunderstanding, or ambiguity, with respect to the terms which I have, and may hereafter use, to convey my meaning, it would perhaps be better that I should make a few remarks, explanatory of the precise sense in which those terms are to be understood.

The word *typhus*, signifying *stupor*, is a time-honored term, applied to a particular form of fever, which is supposed to have that condition (*stupor*) as its *principal* characteristic feature. So far, I would not object to a use of the term; nor do I object to a continuance of its use, or of its correlatives *typhous* and *typhoid*, for the purpose of distinction, between one form or variety of fever and another; but I think it rather unfortunate that, in this, as well as many other diseases, terms more expressive of their

essential and special pathology have not been employed; and it is upon this ground, that I would base any objections to the use of the term typhus, and its correlatives. For though *stupor* may be a prominent and uniform trait in their character, yet it cannot be regarded as an *essential* or *primary element in their pathology*; and if it was, it could hardly be pronounced characteristic, in as much, as *stupor* is often observed in diseases having no other typhus or typhoid traits of character. The correlative terms, typhous and typhoid, are understood to represent or specify those particular diseases, and conditions of diseases, which, though not *identical*, yet in their general character, bear a striking resemblance to typhus, not so much, however, with respect to stupor (which is but *consequential* to, and *indicative* of, deranged innervation, or impaired function of the animal or senso-motory nervous system), as in other pathological phenomena, not always so apparent, but more uniformly present, if not more characteristic and essential to what is considered and understood to be the typhoid condition—namely: *a depraved and vitiated condition of the blood*. Now, this condition of the blood, to which the term *necræmic* has been applied by a distinguished pathologist, (Doct. Williams,) signifying, according to the etymology of the word, *death of the blood*; or, according to Dr. W., “death beginning with the blood,” which is, perhaps, more expressive,—and the correlative term *necræmic*, which I have repeatedly used as synonymous with typhoid, to express that condition, or a tendency to it, fully expresses, according to my understanding, *the primary essential element in the pathology of all typhoid affections*, and which brings into one general family every disease, and *condition* or *modification* of disease, which has this *element* in its pathology.

This *necræmic* condition, as I understand it, consists in such molecular changes in the blood, as to destroy the relative proportion which, in a normal state, exists between the several constituent principles of the blood, and which are essential to its vitality. Or, it may be, that the *loss of vitality* results from the *direct action* of a poison, destroying the *plasticity* of the blood, whereby it is rendered unfit and incapable of undergoing those molecular changes which are necessary and essential to the vital processes, without affecting materially the relative proportions of its constituent principles. However that may be, it cannot be doubted, that ~~in all malignant typhoid affections, such as, typhus and typhoid~~

fevers, yellow fever, plague, &c., the blood manifests evidences of a change, in its vital and chemical properties, at *some time* during their progress—except in *aborted* cases—often at their commencement, and (during the prevalence of epidemics) even antecedently to the invasion of the disease, as shown in its want of plasticity and coagulability, and a rapid tendency to putrescency. These facts alone, without reference to the pathognomonic signs of the condition, or of those diseases, are sufficient, in my estimation, to justify the assumption that *necræmia* is an essential and *primary* element in the pathology of all typhoid diseases. It would be folly to assert, that the circulation of the blood, and its vitality and integrity, could be long preserved without a healthy nervous influence; and I think it would be equally so, to assert that the nervous system is not equally dependent upon an equal distribution, and healthy constitution of the blood, for the performance of its functions. No violence, therefore, can be done to reason or to common sense, in supposing that certain morbid agents may effect primary changes in the condition or constitution of the blood, and through and by the blood, upon portions, or all, of the nervous system, according to the nature of their respective *elective affinities*, as well as to suppose the primary action of those agents to be seated in the nervous system, or some portions thereof. That diseases may have their *origin*, or first link of their morbid concatenation—sometimes in the nervous, and sometimes in the circulatory systems, does not, I think, admit of a doubt; and I have endeavored to show, on a former occasion, that those diseases, which had their origin in the nervous system, and are regarded as dynamic, did not require, as an element in their pathology, any notable or appreciable change in the character or constitution of the blood, and that disturbance in the circulatory system in those diseases, had reference to the *distribution*, and not the *constitution* of the blood. It is true, that the blood often becomes changed, vitiated, and depraved in its character, during the *progress* of these diseases; but when it does so, a corresponding change occurs in the nervous system, and in the character of the disease, which, from a dynamic, becomes an adynamic disease, with such a train of symptoms as is generally characteristic of the necræmic or typhoid condition.

In connection with this subject some very important questions arise, both as to the nature of this condition, and the causes which

produce it. Is the condition which we recognize as *typhoid* in certain protracted or advanced stages of disease, such as bilious fever, pneumonia, dysentery, etc., *really typhoid*? It is so, as far as *appearances* go; and if it is so in fact, it will furnish us with some little insight into the nature of the causes of typhus and typhoid diseases. This *condition* we know, or have every reason to believe, is the result of the action of septic and poisonous matters generated and retained in the system, consequent upon the suspended secretory and excretory functions of certain organs, as the skin, the kidneys, the liver and the intestines; and we know that in consequence of the action of those poisons, certain changes affecting the vitality and chemical properties of the blood take place, as manifested by a change of color and consistence, becoming darker and more liquid and rapidly putrescent, and giving rise to a general hemorrhagic tendency from *internal* mucous surfaces, and to eruptions, ulcerations, sudamina, petechiæ, etc. And we know that this changed condition of the blood is *followed* by, or *accompanied* with, a corresponding change in the nervous system, or parts thereof, and *particularly* the *animal* or senso-motory nerves, as manifested by a dullness of the perceptive and intellectual faculties; by drowsiness and stupor, by a loss of muscular power, and often by other signs which show a general adynamic condition extending to, and including the *organic* nervous system. On a previous occasion, speaking of the functions of the brain and nervous system, and the causes which influenced them, I adverted to the fact, that in many of those diseases of *depression* and *congestion* which have been miscalled "adynamic," and which owe their origin chiefly to miasmatic, meteorologic, and atmospheric influences, the intellectual and animal powers were often preserved, comparatively unimpaired amidst the almost *total* prostration of the *organic* nervous system. And it is no less remarkable, that in those diseases, which are more properly "adynamic," or *conditions* of disease, having their origin in animal poisons and animal effluvia—as in the condition and diseases under consideration—it is often the case that while the animal powers are almost completely stricken down, the *organic* powers continue to act with apparently little interruption. Many cases I could adduce in proof of this fact, but one must suffice: I attended a young man in an attack of typhoid fever, and for fifteen days he laid in a drowsy, semi-comatose state, from which he could be aroused with some little

difficulty, to take food, (for which he had a relish most of the time,) to have his bed and clothing changed, etc., during which time, his pulse, which varied little from *natural* in volume and strength, did not vary *three* beats from ninety. On the sixteenth day it came down five beats; on the seventeenth, five more; and his stupor and fever left him; and on the twenty-second, he left his bed and room only seven pounds lighter than when he took them. This case I may have occasion to refer to again, as it furnishes other points, besides the one attempted to be shown, in the character of typhoid diseases, and the nature of their causes: but, to resume my argument.

We know, also, that this *condition*, which may originate in any disease, as the consequence of the *defective, interrupted* or *suspended* secretory and excretory functions, and varies in degree accordingly, is the *same*, or *apparently* the same, in its general pathological signs, with respect to the nervous and circulatory systems, as is observed in those *diseases essentially typhoid in their character*, which are the product or result of specific animal poisons or effluvia, not generated in the system but operating from *without*, and when taken into the system, sooner or later, commence the work of *regeneration* by their diffusion through, and contamination of the blood, constituting what is recognized as the *zymotic process*, or action of those poisons which is of longer or shorter duration, according to their essential and specific nature. This condition differs from the typhoid diseases in its pathognomonic signs, (such as it has,) as those diseases differ in those signs from each other; and they differ materially, also, in their mode of production, one requiring the zymotic process as essential in its production—the other, not, unless the production or generation of poisons in the system from suspended functions, where they did not before exist, or their action upon the nervous system, when produced, be considered as zymotic; in which light, I hardly think it ought to be considered—for if it should be, certain of those diseases would be liable to a double zymotic action, in as much, as the condition in question is often superadded to typhoid and other zymotic affections, to all of which it imparts increased malignancy and danger, sometimes bringing them to a very sudden and fatal termination.

As time and space will not allow me to conclude my remarks upon these subjects, I will close them for the present, to be resumed in my next letter.

I feel as though an apology was due the reader, for my *ramblings* in the first part of this letter; but really there are so many side-issues—so many *stations, switches and turn-outs*, that I find it difficult to avoid running out of the right track, every now and then; and as I do not profess to belong to the *regular train*, I hope I may be excused for running off occasionally.

Yours, very respectfully,

SAML. D. HOLT.

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ARTICLE XIII.

*A Case, resembling Hydrophobia, produced by the Bite of a Dog, supposed not to be Mad; with Remarks on the Pathology of Hydrophobia.*  
By W. H. DOUGHTY, M. D., of Augusta, Ga.

June 8th, 1856, 7 o'clock, A.M., was called to visit Mary, the property of W. L. of this city, said to have been bitten by a dog. She is about 65 years of age, infirm and weak. She states that upon entering a yard, about two weeks previously, she was bitten by a dog (very much enraged—seemed always to have a special enmity to her,) on the calf of the right leg. The wound was dressed shortly afterwards with adhesive plaster. She suffered but little pain or inconvenience from it, until the 6th, when she experienced slight difficulty in swallowing, accompanied with rigors and chilly sensations; this, however, attracted no attention until the afternoon of the 7th, at which time she was seized with great difficulty of breathing, and a choking sensation upon attempting to swallow. These distressing symptoms continued to recur up to the present time, which reveals her situation, as follows:

Great disquietude and anxiety of mind; her hands continually brought up to her throat, as if to remove something; occasional rigidity of the muscles of the neck; intermitting spasms of the muscles of respiration, including those of the pharynx and larynx, recurring every five or ten minutes; great disfiguration of the face during the spasm; dysphagia induced by attempting to swallow water, tea, or other fluid—the patient seemed to dread even their approach; during the spasms (some of which I witnessed,) the patient was purple and livid in the face, almost asphyxiated; extreme irritability of the body; currents of air, motion of the limbs, or even the access of light, readily exciting the frightful spasms;



anticipating the spasm, she would plead most piteously for pressure (firm) to be made upon the sternum. The wound was situated upon the inner side of the right leg—of a lacerated character—two inches in length by one in breadth; ragged at the edges, foul looking and painful; pulse frequent and small, 130; tongue loaded; bowels obstinately constipated.

*Treatment.*—Sulph. morphine, quarter grain every half hour.

Visit at 10 o'clock, A.M. Patient seemingly better; spasms recur at longer intervals; situation otherwise the same.

*Treatment.*—Calomel, grs. xx.; camphor, grs. viij.—into two powders—one every two hours. Injections of castor oil, to be repeated every hour, until bowels are moved; blister 6  $\frac{1}{2}$  2 to the back of the neck; dilatation of the upper part of the wound (dark, grumous blood issuing); application of lunar caustic to same; ley poultices; beef-tea and chicken soup, as much as possible.

Visit at 5, P.M. Patient the same; has slept some since last visit.

*Treatment.*—Croton oil, gtts. ij., every two hours, until bowels are moved; nourishment, &c.

June 9th, 9 o'clock, A.M. Patient dead. Spasms recurred at midnight with increased severity, but ceased about daylight; shortly afterwards, she died from exhaustion.

REMARKS.—The pathology of the nervous system, has ever been, and must necessarily remain, enveloped in much obscurity, until the science of physiology, aided by all the appliances of art, has developed much more satisfactorily than it has hitherto done, that branch of it which refers to the function of the nerves in health. It affords, however, a pleasing gratification to those who have devoted themselves to this scientific study, that their labor has not been entirely unrewarded; for, if they have not succeeded in demonstrating to the letter, the absolute function of this part of our mysterious organism, yet the present state of efficiency of the practice of medicine, is due to them—a proper understanding of its function in health being necessary, before we can appreciate its morbid states. It is not our purpose to go into a lengthened disquisition on the diseases of the nervous system, but simply to examine some of the views entertained in regard to the pathology of that subtle disease, Hydrophobia. It is but seldom that a physician has the opportunity of studying this disease

in the human subject, many men of large professional experience, never having seen or met with a case. It is to the veterinary surgeon that cases of hydrophobia most frequently present themselves, being a disease which has its origin amongst the lower animals. It is ascertained, in the study of this disease, moreover, where the practitioner of medicine is brought in consultation with the veterinary surgeon, that a knowledge of it, as it exists in animals, is necessary to a proper appreciation of it in man. Two different opinions are held in regard to its pathology, and whilst the advocates of each agree, that the perverted action of the nervous system is the principal agent in determining the fatal issue, (nearly every case terminating so,) yet they differ in regard to the seat of the primary constitutional irritation. Upon an examination of the bodies of those (men and animals), who have died of hydrophobia, the lesions most generally found, are an inflammatory appearance of the mucous membrane of the pharynx, larynx, and œsophagus, sometimes extending as far down as the stomach and intestines; also, congestion and irritation of the brain and its membranes, the medulla oblongata, cervical spinal marrow and their membranes, together with, congestion and dark discoloration of the lungs.

No change in the substance or structure of the nerves seemingly affected, can be demonstrated, either by the eye, the microscope, or any other means. It is necessary to state, however, that these marks of inflammation, more particularly those of the throat, are frequently wanting—no trace of them being discoverable. The principal nervous phenomenon and most characteristic symptom of this disease is dysphagia. Now, the point as to which the difference exists, is, whether the indications of inflammation found in the throat are primary or secondary to the irritation of the nervous system which accompanies it. Some pathologists conceive, that the inflammation of the throat demonstrated in most cases after death, is the primary manifestation of the disease in the system, and that the nervous state which gives rise to the spasmodic stricture is due to irritation of the sentient extremities, of the pharyngeal nerves, claiming in its support, in those cases where no signs of inflammation are found, its latent form. They also assert that this inflammation is of a specific character, not from any demonstrable differences from ordinary inflammation, but to accommodate their ideas to the precedence of the inoculation. That

hydrophobia is a specific disease produced from inoculation with a specific poison, is also held by those who locate it in the nervous system primarily. The following quotation from an author\* who is an advocate of the inflammation being specific, will serve as an exponent of the class:

"To my mind, (says he,) the evidence that there is specific inflammatory irritation in the mucous membrane of the mouth and pharynx in this disease, stops little short of certainty. The poison, in the first place, comes from the mouth of the dog, and following the general law of morbid poisons, especially of those that have a period of incubation, it is most likely to locate itself in a similar part in man, as well as in other animals. Secondly, appearances of inflammation after death, though not constant, are much oftener found here than any where else. Thirdly, the spasmodic symptoms commence in those muscles, whose nerves are in immediate connection with the surface in question; and are such as would naturally arise from reflex action of these nerves. Fourthly, if the disease is communicable by the saliva of man, as there is reason to believe, then there must be a perverted action of the salivary glands themselves, or of the surfaces on which these secretions are poured out; and this action must be a specific one, inasmuch as the secreted product when inoculated anew, uniformly gives rise to the same set of symptoms."

We shall notice these, in the order in which they are laid down; and in the first place, we remark, that no significance can be attached to the derivation of the poison from the mouth of the dog, when we remember that the mouth is the only aggressive, and at the same time, defensive weapon with which he may operate, and this explains why this secretion ("poison from the mouth") is thus deposited in the system of the person or animal bitten. I know of no general law, whereby any animal poison introduced into the system, has the tendency to manifest itself in a part similar to that introducing it: to suppose, that because a poison is communicated to one animal from the mouth of another, that, therefore, it must manifest itself first in the mouth of the one bitten, is simply ridiculous. The poison communicated by the bite of the rattlesnake ought, according to this, manifest itself first in the mouth of the animal bitten, because the mouth was the agency employed in

\* *Essays on the Physiology of the Nervous System, with an Appendix on Hydrophobia*, by Benjamin Haskell.

the inoculation. Following the law which regulates the action of animal poisons, its influence would be exerted as soon as its entire absorption takes place, and the manifestations of that influence would be general and not local, inasmuch, as we know of no special affinities of those poisons for particular parts of the system. The syphilitic virus certainly has no general law of "similarity of parts communicating it;" for, wherever deposited, and by whatever means introduced, it is certain of the reproduction of its own kind. The same is true of gonorrhoeal matter, whether deposited in the eye or the vagina of the female. Smallpox also, whether induced by contagion or inoculation.

In the investigation of the nature of this disease, no experiments, I believe, have ever been instituted to ascertain whether or not, it might be communicated by some other secretion of the rabid animal, than the salivary, exclusively; but it is presumable that it might, from the following circumstance, furnished me by a medical friend, which occurred under his own observation: "A bitch of his, having seven pups, was poisoned, together with two other dogs; one of the pups immediately before the act of poisoning, was removed by a friend to whom it was given. Shortly after receiving the poison, she nursed her pups. In the course of two hours, one of the dogs and the bitch were dead, and by dark all the pups died, manifesting the same symptoms as did the mother and dog. The pup that was removed did well and grew to full development." Now, the effect of an animal poison introduced, would, we suppose have the same influence, as did the mineral (arsenic as was supposed) in this instance: every secretion would become impregnated with it sooner or later. We find in Druitt's Surgery,\* the following language in reference to this point: "It is uncertain, whether the whole solids or fluids of the animal are not poisonous also. In fact, there is some reason for believing that the disease may be communicated by the mother's milk." He cites the following instance—"Two ewes were bitten by a mad dog and died hydrophobic. One had two lambs, the other, one; all three of which were seized with the disease a week afterwards, although they had not been bitten by the dog, nor, as was supposed, by the mother." This case certainly throws its testimony in favor of the general impregnation of the secretions; for, in the absence of all proof to the contrary, we are bound to believe that

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\* Druitt's Surgery by Sargent, p. 167.

the disease was communicated to the young by the milk of the mothers. The following quotation from Youatt\* is directly opposed to the inferences which we would be justified in drawing from the above cases: "A portion of it (virus) is taken up and carried into the circulation and acquires the property of assimilating the secretions to its own nature, or it is determined to one of the secretions only." Further on, he says: "So it is with the salivary glands; in them it is formed, and to them it is determined, and from them and them alone, it is communicated to other animals." This expression seems to be unsubstantiated by any experiments or arguments, as given by him, for in all the cases which that author gives in his treatise upon this disease, not a case is reported which would warrant such an exclusive inference, whilst the case of the bitch, and that of the ewes before spoken of, go to prove, the first by analogy and the second positively, that it may be communicated by at least one secretion of the animal other than the salivary.

Passing from this point to the consideration of the second, we remark, that were the disease attributable to a local inflammation of the throat, following the order of all the phlegmasiæ, symptoms of a local nature should be the first to manifest themselves, but instead of finding sore-throat in the commencement, we have the following constitutional symptoms, viz., "a rapid and irregular pulse—not inflammatory;" a peculiar disorder of the mind; chilly sensations running down the back and spine; pain in the bitten part (even after it is cicatrized) often following the course of the nerves.

After these have continued some time, "perhaps a couple of days," the difficulty of swallowing comes on. It is said that "in the horse, the disease commences with great distress and terror and profuse sweating; he soon becomes frantic and outrageous—stamping, snorting and kicking." It is recorded of "eight sheep which were bitten and became rabid, they were exceedingly furious, running and butting at every person and thing, but did not bite. They drank freely." There is no case recorded, within my knowledge, wherein inflammation of the throat was evident, prior to the long-continued spasmodic action of the muscles of the part. In the case, accompanying this article, the gums and mucous membrane of the mouth were of a pale and whitened aspect, yet, possibly injection of the capillaries of the throat might have been

\* Youatt on the Dog, p. 231.

discovered after death. We conclude our remarks to this, by giving the following quotation from Dr. James Johnson: "We must conclude (says he,) that it cannot be denied but that the most evident indications of inflammatory action attend and distinguish the symptoms of hydrophobia; that we have often inflammation of the oesophagus, pharynx, larynx, and occasionally of the brain and spinal cord; yet, it is generally admitted, that these appearances are more the consequence, than the cause of the disorder, and that although frequently present with, they are by no means essential to the existence of hydrophobic action."

In the third proposition of the author, (Dr. Haskell,) he seems to regard the spasmodic symptoms as the exaggerated reflex action of the nerves distributed to the mucous surface of the throat, caused by the inflammation, but disregards the idea that these are the result of irritation of the nervous centres. All physicians are perfectly familiar with the fact, that excitation of the peripheral extremities of the nerves distributed on the membranous surfaces of the body, will often prove the exciting cause of a convulsion in the epileptic; yet, it cannot be said, that those surfaces whereon the nervous extremities are distributed, are the seat of the disease—the excitation simply developing the evidences of the already diseased nervous centres (cerebro-spinal axis). As pertinent to the issue, we give the following extract from Todd & Bowman's Physiology: "Nothing (say they) is more certain than that an affection of the central extremities (nervous centres) of the nerve fibres, is sufficient to excite sensations precisely similar to those which the excitation of the peripheral portion of the same fibres would produce. Hence it is that a morbid irritation at the centre is frequently referred to the periphery."\* It is the direct application of this certain principle of nervous action which fully explains the production of these spasmodic symptoms of the throat, and all the respiratory muscles, so distressingly manifested in this disease. All the nerves distributed to the respiratory apparatus take on this extreme excitability, and manifest reflex nervous action under the slightest stimulus. It is not necessary that the first impression should be made upon the pharyngeal nerves, to excite spasm, for a draft of air, a motion of the limb, or the access of light, may give rise to the dysphagia, as well as the other convulsive movements of respiration. That the pharyngeal nerves may and do perform reflex

\* Todd & Bowman's *Physiological Anatom. and Physiology of Man*, p. 214.

actions in this disease, admits of no question, but their extreme susceptibility to impressions is the result of primary irritation at their nervous centres.

The consideration of the fourth proposition involves the question of the communicability of the disease by other secretions of the body, besides the salivary. Having expressed our view upon this point at some length, in the discussion of the first proposition, we dismiss this, with the statement, that the case of the bitch recited, and that of the ewes, prove almost conclusively the first by analogy, and the second positively, that the communication of the disease is not confined to inoculation with the salivary secretion alone.

Having thus endeavored to give a general exposition of this distinctive pathology of hydrophobia, we dismiss the farther consideration of it with the remark, that those changes found after death, are rather the consequence than the cause of the disease, and that they are emphatically secondary to the constitutional irritation, and that this latter exists primarily in the nervous centres. There may seem to be a discrepancy existing between the character of the arguments adduced and the caption of the case reported, but I have not hesitated to argue the pathology of the true hydrophobic disease, inasmuch as, this case resembles it in every outward manifestation. The difficulty of swallowing, the intermitting spasms of respiration, the peculiar disorder of mind, and the extreme irritability of the body, taken in connection with the bite, serve unequivocally to confirm it a case of hydrophobia. But it may be objected, that this disease has its exclusive origin from inoculation with the poison by an animal actually laboring under *rabies* at the time of communication. It is proper to state, however, that there are those who believe, that under a predisposition to the disease in the individual, that the bite of a dog simply enraged may have the effect occasionally of producing hydrophobia. Without adopting the latter view, I think that it derives plausibility from some general facts ascertained, in regard to the influence of the nervous system upon the secretions of the animal body, and it likewise, receives support from the case reported. That influence may be exerted to the effect of producing changes, either in the quantity or quality of the secretions. The first is exemplified, when under the influence of fear or fright; an increase in the secretion of urine takes place—it being sometimes discharged invo-

luntarily. The second, in the change produced in the milk of the nurse, whilst laboring under violent passion, producing in the infant irritation of the alimentary canal, convulsions and even death. Will it be denied by those who require the dog communicating it to be laboring under *rabies*, that the nervous system of the dog or other animal, is capable of exerting the same changes, and producing similar modifications in their secretions? Reasoning from analogy, why may not modifications of the saliva of the dog, for instance, under the influence of rage or anger, be possessed of equally deleterious and poisonous properties, as those of the milk in the case of the mother and child? The mode of its absorption cannot possibly be an argument against it. That it receives support from the case reported will not be denied, when it is recollected that there were no circumstances in the history of the dog to warrant suspicion of *rabies*. The dog had observed his usual habits, but seemed to have always entertained a hatred for this person. I saw the dog shortly after the occurrence, there was nothing strange or rabid, either in his looks or behavior, but on the contrary, he seemed to be good-natured and friendly-disposed towards myself. Eight months have now elapsed since the accident, and no symptom of *rabies* has yet manifested itself in the dog. If it were not a case of hydrophobia, what was it?

Hoping that the report of the above case may call attention to certain points of interest therein discussed, I here close these remarks, already extended beyond my original design.

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ARTICLE XIV.

*Spina Bifida—three Cases from one Mother.* By E. M. PENDLETON, M. D., of Sparta, Georgia.

In a practice of twenty years, I have seen but four cases of that terrible congenital disease, or malformation, termed *Spina Bifida*. The first, was in consultation with Dr. Lynah, of Warren county, which terminated fatally, at several years of age. The sac containing water and connecting with the brain through the spinal column, was at the end of the os coccygis. The other three cases have occurred within the last five years, and singularly enough, were all the offspring of the same mother, a lady of this county, of



the first respectability. Her first child, a son, had a very small sac on the left side of the spinal column, in the lumbar region, which did not seem to connect specially with the spine, and but for the further developments of the case, would not have produced much apprehension. Hydrocephalic symptoms, however, supervened in a few months, the head became enlarged and the child had occasional spasms; it died in a short time.

The second child was apparently healthy; but as the parents had removed from their former residence, I lost sight of the case, until summoned to attend it, in consultation with another physician. It labored under the effects of catarrh and dentition, the brain suffering greatly. It died in a few days after I saw it.

In the third case, I attended the accouchement, and found as soon as the child was born, that it presented symptoms of paralysis. Upon examination, the same fearful sac, at about the same point of the lumbar vertebrae presented itself, only it was much larger than the other; the legs crossed and were perfectly paralyzed. The head was larger than natural, and soon exhibited hydrocephalic symptoms. It lived several months, and cried nearly all the time of its waking existence.

Several months since, I was summoned to the same lady in her fourth confinement. I went with fear and trembling, feeling a strange premonition that I would have the same difficulty to contend with as formerly. Anxiety and apprehension were depicted on the countenances of both parents, and I could but offer a silent prayer that this one might be well formed. But, alas! as the child presented itself to our vision the first time, we detected the same inability to move its lower extremities, the same malposition of the legs, and the same fearful fissure in the back, only larger, apparently, than either of the others. We turned away sickened at the sight. In other respects, the child seemed to be healthy and sprightly. It too, soon followed its predecessors to the grave.

What can be the cause of this singular concatenation of unfortunate births, from parents who are both well formed, vigorous and healthy, in every possible respect? The father is of a bilious, lymphatic temperament; the mother, sanguino-nervous—the parents of both, still alive and healthy. This would seem to be one of the best crosses imaginable. The maternal grandmother, however, springs from a family of over sanguineous temperaments and

scrofulous diatheses. They are very prone also to intermarriages. Her immediate offspring, however, are all healthy, and we do not conceive that there exists any just cause of suspicion on this ground.

The case is one of great interest to those who love to investigate the profound intricacies of the physiological and pathological relations of parents and offspring. We feel an especial interest in presenting these cases, hoping that such untoward effects may be traced to their legitimate causes, and some prophylaxis be instituted, that may arrest the calamity in future. If not in the case under consideration, at least in some which lie in the lap of the future.

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*A Few Thoughts on Epilepsy.* By L. M. LAWSON, M.D., Professor of the Theory and Practice of Medicine, in the Medical College of Ohio.

This disease, (which has well nigh been ranked among the *opprobria medicine*,) has of late years received a large share of attention from practitioners and pathologists. But notwithstanding these laborious and extensive investigations, it still remains, (so to speak,) a *terra incognita*. It is to us, as it was to our predecessors, a *morbus herculeus* or a *morbus sacer*—too often defying our most cherished remedies, mocking alike the skill of the physician and the miseries of the patient.

But in the midst of this darkness and confusion a few glimmering rays of light now and then steal in upon us; and while, in some respects, they serve only to heighten the horrors of the scene, they do reveal a few tangible points, which may assist us in reaching more rational conclusions.

We cannot say that epilepsy has, in fact, any *pathological anatomy*; indeed, the morbid changes which have been observed after death, exhibit but little uniformity, and therefore cannot be regarded as essential to the disease. Probably the only condition which throws much light on the malady, is the state of *atrophy* observed in the cortical portion of the brain in old epileptics. This condition indicates a derangement of the *nutrition* of the part, the result of *diminished* action.

The low state of therapeutics in relation to epilepsy may be traced to two causes: 1, The absence of any recognizable pathological anatomy; and, 2, An effort to supply this great hiatus by the use of *specifics*. Hence, even our French confrères, who usually exhibit so much philosophy and careful discrimination, do

little more than employ, in the most routine manner, some fancied specific. Trousseau, for example, finally fixes on the belladonna treatment, which he thinks must be continued from two to four years.

Dr. Todd, of London, has recently attempted to bridge over this great chasm, by suggesting that a *polarized* state of the brain, (or certain parts of it,) occur, and that it is the "disruptive discharge," (chemically speaking,) which induces the paroxysm. He recognizes two degrees: one involving the cerebral hemispheres, leading to loss of consciousness and impaired intellect; the other, more profound, extending to the tubercula quadrigemina and mesocephale, causing the convulsions. All this he ascribes to a change of *nutrition* of the part, which induces a highly charged or polarized state, and the tension which ensues leads ultimately to the *disruptive discharge*, and all the phenomena of the paroxysm. He does not admit that inflammation, congestion, or anæmia produce the disease; but that it often arises from the specific influence of some poison circulating in the blood, among which may be mentioned the influence of retarded urea.

These expressions, however, are only feeble approaches toward an explanation; for, although they convey some faint idea of what may possibly be occurring, they are so dim and shadow-like as to leave the inquirer still faltering and undecided. The only suggestion of *practical* value, embraces the idea that the foundation of the disease is essentially deranged *nutrition*.

Dr. Radcliffe has offered an explanation of the principal phenomena which occur in epilepsy and analogous diseases, which embraces as a fundamental idea *diminished* nervous action. According to this view, the spasmodic action is due to diminished circulation and innervation, in consequence of which molecular contraction of the muscles ensues. Spasmodic action, therefore, is due to the *withdrawal* of stimulants, instead, (as was before believed,) an increase of excitement.

The *novelty* of this doctrine will secure for it a hearty rejection by those who are accustomed to think only in a single channel; nevertheless, there are various facts and analogies, (which cannot be now enumerated,) which strongly favor such a conclusion, if they do not positively establish it. Let me name but one—by no means the most conclusive: We can *bleed* a patient into, first, syncope; second, *convulsions*. Here is diminished excitement followed by violent muscular contraction. Is that contraction due to an increase or diminution of excitement? But one answer can be returned.

Independent of either of these theories, I am led to believe that the essential pathology of epilepsy is *diminished* action, probably connected (at least ultimately) with impaired nutrition. It may, however, arise from the action of poisons, from sympathetic influence, or direct derangement. It is, in fact, connected with impair-

ed vitality, generally, such as sluggish innervation, circulation, secretions, mental manifestations, and so on. All this may result from onanism, retained urea, the elements of bile or other poisons, sympathetic derangement of the alimentary canal and uterus, and excessive and exhausting mental efforts or emotions. In each instance, however, the *ultimate* effect, (and that which leads to regularly developed epilepsy,) is exhausting in its character, and finally impairs nutrition.

It is a peculiar fact, and one which is very significant in this connection, that an intercurrent excitement—such as fever or inflammation—temporarily suspends epilepsy, which could hardly happen if the disease was not one of diminished vitality. An instance has come to my knowledge in which a severe fall, from some considerable height, had the same effect.

The conclusion which appears to me most in accordance with the phenomena of epilepsy is, that the essential pathological state is one of depressed vitality, including impaired nutrition. But while this is admitted, we must often look beyond the nervous system for some exciting or predisposing cause; and hence there is some justness in the following varieties of epilepsy, as enumerated by Dr. Cheyne: *epilepsia cerebialis, sympathetica, stomachica, hepatica, nervosa, uterina, a dolore*. It must be remembered, however, that these functional derangements may be a consequence and not the cause of an attack.

In regard to the urinary secretion, it has been shown by Dr. Hunt and Dr. Todd, that certain derangements of this function may lead to epilepsy, and that its cure consists in correcting that condition; and the same remarks apply with equal force to the hepatic function. Thus, Dr. Todd found the urine albuminous, with deficient urea; Dr. Hunt observed the secretion to manifest a feeble acid reaction, with low specific gravity, increase of mineral ingredients with diminution of urea and other organic matter. These facts, coupled with the observations of Dr. Prout, that when soda and ammonia are in excess, urea becomes diminished, and that soda and potash seriously injure the nervous system; and we have a key to at least some of the morbid changes which occur in such cases.

But, after all, the great object is to find a successful mode of *treatment*. Unfortunately, most of the *specifics* have failed, or if occasionally successful, they are not so with sufficient uniformity to establish for either one a particular pre-eminence. Thus, nitrate of silver, oxide of zinc, sulphate of copper, iron, arsenic, digitalis, valerianate of zinc, belladonna, the recently vaunted cotyledon umbilicus—and an innumerable host of similar agents—have each in their turn signally failed. It is true, each may at times succeed, but their application is altogether empirical, and therefore necessarily unsuccessful.

In view of the depressed state of vitality, the leading indication

with me is to improve the tone of the system by the administration of stimulants, tonics, and suitable nourishment. For this purpose I employ brandy, iron and animal food. These agents improve the tone of the system, and I have witnessed the suspension (and probable cure) of the disease while under this course of treatment. In one case of six years' duration, violent paroxysms occurring at least weekly, with the "petit mal" almost daily, the paroxysms were subdued, and the patient apparently restored, under the use of ounce doses of brandy three times a day, together with purgatives, and small doses of hyoscyamus and strychnine.

But I would by no means neglect the kidneys and liver. If there is diminished urea, employ diuretics; if the alkalies have increased in the urine, give acids, especially the nitro-muriatic. If the liver is torpid, (which is almost invariably the case,) give cathartics, containing more or less mercury. I place great reliance on the judicious (but decided) employment of cathartics; but none of these agents should interfere with the tonic and stimulating treatment. Restore the general health by means of alteratives and tonics, and by keeping the renal and hepatic emunctories acting freely, and then overcome the nervous disease by cardiac and nervous stimulants.

Among the class of remedies known as *specifics*, (so called because their mode of action is unknown,) none has gained more reputation than the *oxide of zinc*. M. Herpin (who received a prize from the Institute of France, in 1850, for his treatise on this subject,) eulogises the virtues of zinc, and indeed placed his chief reliance on that agent. The success of M. Herpin was very remarkable. He gave the zinc in doses of six to eight grains daily, in divided portions, augmented every week by two grains daily, until the dose reached *forty-five grains*! This was continued for months in succession. The nausea, which appeared at first, soon passed off, and no further inconvenience from the large doses was experienced. He mentions one remarkable case in which 1200 fits had occurred, cured by a combination of zinc and belladonna. Of 40 cases treated with the oxide of zinc alone, 28 were cured—a far greater success than has fallen to the lot of most practitioners.

It does not appear, however, that others have been equally successful with this agent. Thus, M. Trousseau, in the very face of Herpin's experiments, abandons the zinc, and now relies, mainly on belladonna. He employs a pill composed of the powder and extract of the roots of belladonna  $\ddot{a}$  one-seventh grain. One pill is given every night for the first month, which should be increased one for each month up to the fourth month. He has cured 20 out of 150 cases; and M. Blache has had about similar success.

In regard to prognosis, it may be remarked that the principal elements are age, duration of the disease, frequency of paroxysm, etc. The periods most susceptible of cure, are, first, between 10 and 20 years, and, second, above fifty; from 20 to 30 being the

most unfavorable. It is an important fact mentioned by Herpin, that when the paroxysms have not exceeded 100, he cured 74 per cent.; but when they exceeded 500 he did not succeed in curing a case.

One of the most important elements of success in treatment, is *perseverance*. Trousseau remarks that if, at the end of one year, a little mitigation can be perceived, there is ground for encouragement; but that the medicine must usually be continued from two to four years. I am fully persuaded that our want of success often depends on the frequent change of remedies, and the too early abandonment of even a correct course. We should study well our case, become perfectly sure of its essential points, and then adopt such course as promises most success, and *persevere to the end*. No doubt it was in this way that M. Herpin secured a higher percentage of cures than his cotemporaries, and it is by the same unflinching course that others can obtain a like success.

Finally, I would enumerate the following points in the treatment:

1. Cathartics, more or less mercurial.
2. Tonics, especially iron.
3. Acids or diuretics, in deranged urinary secretion.
4. Stimulants, brandy, whisky, gin.
5. The special agents, oxide of zinc being preferable.
6. Belladonna, combined with the oxide or valerianate of zinc, in special cases.
7. Above all, *persevere to the end*.—[*Western Lancet*.

#### *Stimulant and Tonic Treatment of Epilepsy.*

At one of the late meetings of the Medical Society of London, Dr. Radcliffe read a paper "On the Necessity of a Stimulant and Tonic plan of treatment in Epilepsy." His experience corroborates the views expressed by Professor L. M. Lawson, in our last No. We copy the following notice of Dr. Radcliffe's paper, and the report of one of the cases treated, from the London Lancet for January.—[*Western Lancet*.

"In this paper, the author related several cases in which a stimulant and tonic plan of treatment had been employed with apparent benefit. Before doing this, however, he directed attention to a point of some significance, both theoretically and practically, and this was, the marked improvement in the feelings of the patient, which was noticed as having taken place in more than one instance *after dinner*. More than once the patient had made this remark spontaneously, and he always made it when questioned upon the subject. This point is not always noted in the cases, but the author did not remember a single exception to the statement. Now, this point, it is argued, would seem to be a point of

some significance, both theoretically and practically, for (if the feelings of the patient can be taken as any guide) this improvement after dinner must show that abstinence is not the rule of the treatment in epilepsy. Certainly, prudence is required in arranging the meals of an epileptic, and especial care must be taken to prevent any over-loading of the stomach, but not less certainly is an empty stomach to be dreaded. *Cæteris paribus*, there is no sound practical reason for supposing that an epileptic ought to eat and drink less than another man, and there is some reason to the contrary. At any rate, there is no reason for supposing that he ought to drink less. The author was very incredulous as to any case of epilepsy to which these remarks did not apply. These remarks did not apply to all cases of an epileptoid character, but they applied, he believed, to all cases of real idiopathic epilepsy. Indeed, he found that the supposed exceptions to this rule would never bear examination. Dr. Radcliffe also referred to the manner in which improvement is generally manifested in epilepsy. It did not seem to be the rule, he said, for improvement to be manifested in the gradual mitigation of the convulsion. On the contrary, the rule would rather seem to be for the general health to improve gradually, and for the sopor following the fit to become less and less profound, and less and less prolonged, until the patient wake up immediately after the fit, or even retain his consciousness throughout the fit, the fit in this way becoming more and more transformed into the milder type of hysteria. Unquestionably, the convulsion may cease gradually, but the ordinary rule is rather that it ceases more or less suddenly at some point in the process of recovery; and this ought to be borne in mind, or much disappointment may ensue to both patient and practitioner.

CASE 1.—Mr. C——, aged forty. During the last fifteen or sixteen years, this patient has been engaged as clerk and collector, and for a considerable portion of this time he has walked, upon an average, about twenty miles a day. This was the case until within a few months ago, when, his strength having failed, he became continuously engaged in in-door work. The first epileptic seizure was five years ago, the immediate occasion being the fright and grief consequent upon seeing one of his children killed under the wheel of a carriage; and since this time the seizures have recurred at continually shortening intervals, until these intervals are rarely shorter than a week. The fits are generally violent. They occur generally in the night, and the exhaustion following them is often sufficient to prevent him from going to his work on the following day. Mr. C—— is very abstemious in his habits, and for some time has been a rigid teetotaler. He is always better after dinner.

Dec. 9th, 1852.—His whole appearance is that of a man greatly exhausted, and much older than he really is. The countenance is

pale, and the expression inanimate; the pupil somewhat large and sluggish; the pulse slow (65), and very weak. For some time after the attack, he passes a quantity of pale urine, and he is very excitable. He was recommended to live more generously, taking malt liquor to his dinner and supper, and to have a draught containing half a drachm of naphtha three times a day. He was also recommended to walk no more than he could possibly help.

January 27th, 1858.—Much better. There have been two fits during the last month. No alteration in the treatment.

March 3rd.—Much better. He says that he occasionally walks over in an evening to a brother who lives in the neighborhood, and has a glass of whisky-and-water with him, and that he has a much better night, and is none the worse the next day, when he does this. He has had two fits since the 27th of January. No alteration in the treatment.

July 12th, 1855.—Mr. C—— looks many years younger than he did when he called two years ago, and has altogether lost the pale and exhausted expression of his countenance. It appears that he has been carrying out the prescribed treatment, more or less assiduously, ever since he saw me last, and that the interval separating the fits became longer, until the last interval was full seven months. At present, however, he is not so well, and this alteration he ascribes to his having been obliged to resume his old walking habits. He had walked not less than twenty miles the day preceding his last attack. He was recommended to live more generously while the necessity for walking continued, and to return to the naphtha."

*On Valerianate of Ammonia.* By WILLIAM PROCTER, Jr.

Within two months past a demand has arisen for the valerianate of ammonia, owing to the publication in the Medical Examiner of a notice of its successful employment in severe facial neuralgia by certain French physicians. Having been applied to for this substance, and having studied the subject to some extent, the following remarks bearing on the preparation and properties of the salt are offered to those desiring the information.

When valerianic acid, as it occurs in commerce, is neutralized with strong solution of ammonia, and the liquid is carefully evaporated at 150° F., a syrupy liquid results, which is a dense solution of the valerianate of ammonia. If left to stand for some time it shows little, if any, disposition to crystallize, especially if the atmosphere is moist; but under favorable circumstances crystallization occurs, and the solution becomes a mass of crystals.

After several trials, the following method was adopted, which proved successful. After concentrating the aqueous solution, it



was mixed with twice its bulk of alcohol of 95 per cent., and suffered to evaporate spontaneously. In a few hours, as the alcohol disappeared, crystallization took place without difficulty. As valerianic acid is expensive, and the use of this salt will depend much on its being obtained at a reasonable price, it will be preferable to make the acid and salt in one operation, which can be economically done by the following process, which I have found to yield a nearly pure product.

Take of Bichromate of Potassa, eighteen drachms,  
Sulphuric acid, thirteen fluid drachms,  
Fusel oil (Alcohol Amylicum), a fluid ounce,  
Water, a pint,  
Solution of ammonia, a sufficient quantity.

Reduce the bichromate to powder in a mortar, add the acid mixed with an equal bulk of water and triturate, and then the remainder of the water, so as to get a clear solution. Pour this into a quart flask, add the fusel oil and shake them together at short intervals, until the reaction has abated and the temperature decreased. Then attach the flask to a Liebig's condenser, (or use a retort and receiver,) apply heat, and distil a pint of liquid from the mixture. The distillate (which consist of a watery solution of valerianic acid, with an oily mixture of valerianic acid and valerianate of oxide of amyl, or apple oil, floating on its surface) should then be put in a flask, and solution of ammonia added with agitation, until in slight excess, and the liquid ceases to redden litmus paper. The apple oil floating on the surface should then be removed, and the solution evaporated on a water bath till syrupy, mixed with alcohol, as before noticed, and set aside to crystallize.

A very neat process is to pass gaseous ammonia through syrupy valerianic acid till super-saturated, and then, after slightly heating the dense solution, to remove the excess of ammonia, crystallizing by aid of alcohol, as above.

Valerianate of ammonia is a colorless salt, crystallizing in very thin micaceous quadrangular plates, soluble in water and alcohol in all proportions. When added to washed ether, a part of the salt seizes on the water and attaches itself to the sides of the vessel, whilst another is retained by the ether. Its taste is at first sharp, and then sweetish, its odor slightly valerianic, like valerianate of soda. When its aqueous solution is boiled, ammonia is perceptible in the vapor. According to Lowig it volatilizes without decomposition, and Gregory gives it the formula  $\text{NH}^4, \text{O} + \text{C}^{10} \text{H}^8 \text{O}^2$ . Although very soluble, this salt effloresces when exposed to the air. I have not determined its amount of water of crystallization, nor have I been able to find any statement of the dose of the salt, as the paper in the Examiner speaks of a "solution" without noting its strength.—[*American Jour. of Pharmacy*.

*On the Preparation of Liquid Perchloride of Iron as a Hæmostatic Agent.* By M. BURIN DU BUISSON, of Lyons.

It is known that a great many substances have the property of precipitating albumen from its solutions.

Almost all the acids precipitate it white; acetic acid converts concentrated solutions of albumen into jellies.

Strontia, baryta and lime, form, with albumen, precipitates which are insoluble in water.

Almost all the metallic salts are precipitated by albumen, and the white precipitate insoluble in water, which this substance forms with bichloride of mercury, is well known. To the other metallic salts which possess this property, sulphate of copper, but more especially perchloride of iron, must be added.

Perchloride of iron possesses, indeed, in the highest degree, the property of combining instantaneously with albumen, and of forming with it a precipitate under the form of a consistent and insoluble magma, as Dr. Pravaz has just proved, and every one now knows the importance of the application which this skillful practitioner has recently made of the aqueous solution of this salt for instantaneously coagulating the blood in the arteries, as regards its special employment for the cure of aneurisms in man.

Perchloride of iron unites, indeed, all the qualities desirable (and even exclusive) for fulfilling the object to which Dr. Pravaz has so happily applied it—great hæmostatic power, perfect harmlessness, and solubility in water: it remained, therefore, only to find a mode of preparation which would enable us to obtain this salt always very pure, and its aqueous solution at a maximum density, which might be always and everywhere identical, indispensable conditions for attaining the object proposed by Dr. Pravaz, who has been kind enough to entrust this task to us. The following are the results we have arrived at:—

## LIQUID PERCHLORIDE OF IRON, OF DR. PRAVAZ.

|                                              | Grammes. |
|----------------------------------------------|----------|
| Take, Commercial sulphate of iron, . . . . . | 1,000    |
| Water, . . . . .                             | 3,000    |
| Pure iron filings, . . . . .                 | 100      |
| Sulphuric acid, . . . . .                    | 15       |

The whole is introduced into a matrass, or better still, into an enamelled cast iron vessel, and allowed to digest on a sand bath until the disengagement of gas entirely ceases; it is filtered, and five hundred grammes of liquid hydrosulphuric acid are added to the liquor, and the whole is left to repose for twelve hours; at the end of this time, the solution is boiled for half an hour and filtered.

Two hundred grammes of pure concentrated sulphuric acid are added to the filtrated liquor; the mixture is placed in a porcelain capsule, or an enamelled cast iron vessel, which must not be more

than half filled, and boiled, and pure nitric acid is added in small portions until the last addition causes no disengagement of red vapors; it is then removed from the fire, the liquor is diluted with from twenty-five to thirty times its weight of cold water, and all the iron is precipitated in the state of peroxide with a slight excess of liquid ammonia: the precipitate is washed by decantation with pure water a great number of times, and it is dried in the air by spreading it in thin layers on a cloth.

The dry and pulverized oxide is afterwards calcined at a red heat in a shallow wrought iron vessel, so as not to raise the temperature too high; the astringent saffron of Mars, of the shops, is thus obtained, which is no other than pure peroxide of iron, when it is thus prepared.

The perchloride of iron is afterwards obtained in the following manner.—

|                                           | Grammes. |
|-------------------------------------------|----------|
| Peroxide of iron as above prepared, . . . | 200      |
| White and pure hydrochloric acid, . . .   | 1,000    |

It is allowed to act without heat for five or six hours, and then the vessel is placed in a boiling water bath and heated until the oxide is almost entirely dissolved; this operation must be performed in a porcelain capsule of known weight; the liquid is decanted in order to separate the undissolved oxide, and it is carefully evaporated on the sand bath, stirring continually to the consistence of a thick syrup, the weight of which is then determined: a quantity of distilled water equal to half this weight is then added; the heat is then continued for a short time, and the whole is poured into a filter; the capsule and filter are washed with a fresh quantity of water, equal to the first, and sufficient of this liquid is then added to the first liquid to obtain a homogeneous mixture having the constant density of 43.5 to 44°

By operating thus, we obtain a very limpid liquid, having only a slight acid reaction, but perfectly pure, at the maximum of saturation, and always identical, which may be preserved without any deposition of salt, provided that it be kept in a well corked bottle; it is of a deep brown color by reflected, and of a greenish golden yellow by transmitted light, or in a thin layer.

Five or six drops of this liquid, mixed with the white of an egg, suspended in twenty grammes of water, are sufficient for causing the whole to assume, in less than a quarter of a minute, the form of a mass which, on reversing the vessel which contains it, remains adhering to the bottom of the vessel, and it detaches itself only after a very long time, when the water begins to separate partially, in the same manner as the serum of coagulated blood.

This preparation, therefore, combines all the conditions required for realizing all the anticipations to which the observation of Dr. Pravaz have justly given rise.—[*Jour. de Chimie Med. Western Lancet.*

*Successful Employment of the "Ready Method in Asphyxia" of Dr. Marshall Hall, in a Case of Poisoning by Laudanum.* Reported by E. H. JAMES, M. D., Secretary of the Society of Statistical Medicine.

Dr. Lewis read the following history of a case of poisoning by laudanum, in which he successfully resorted to Marshall Hall's new method of recovering persons drowned, or otherwise asphyxiated:

On the 15th day of August, 1856, Mr. J., a young man, æt. about 28 years; sound constitution and temperate habits; dined and passed the evening with a friend, in the course of which he was heard to complain of pain in his left side, about the region of the heart, for which mustard was applied.

At ten o'clock he left his friend's residence, and made his appearance at his hotel about midnight, and shortly after retired to his room.

In the morning, the door of his room was forcibly opened, and he was found lying upon his back; his respiration stertorous, and not exceeding five or six to the minute; his pulse slow and full; pupils contracted; countenance livid; exhibiting no sign of consciousness. An attempt was made to arouse the patient by dashing cold water upon the face and chest, shaking, applying the salts of ammonia to the nose; but so profound was the coma, that no indication of consciousness could be elicited. Weak brandy and water was next introduced into the mouth, and an attempt made to produce deglutition by exciting the muscles about the pharynx, when, much to the surprise of the bystanders, his countenance became darker, and all respiration ceased.

The patient was immediately turned upon his face, in order that the fluid might escape; sinapisms were applied over the entire length of the spinal column, also over the extremities and chest, and artificial respiration commenced without delay.

For a period of five hours and a half, artificial respiration was constantly continued, with an occasional brief interval to enable us to determine whether all normal respiration had ceased. Dry friction was made simultaneously upward along the course of the veins, the beneficial effects of which were apparent.

During the time when artificial respiration was performed, the aspect of the case was very variable. At times the pulse was irregular and thready; at others, it was less frequent, more regular and firm. Equally great were the variations noticed in the respiration. When artificial respiration was for a time discontinued, respiration would continue with some degree of regularity at longer than natural intervals, and then become less frequent, and more regular until artificial respiration was resumed. Once during the time that artificial respiration was continued, a pint of warm coffee was, by means of the stomach pump, introduced into the stomach with evident good effect, as indicated by improvement in the pulse

and respiration, which, however, was not permanent. A stimulating enema of brandy and water was also administered.

After a lapse of four hours and a half, Dr. Cox saw the patient in consultation with me. At this time, the case was very unpromising. There had been no manifestation of consciousness; the pulse was irregular, frequent and feeble; the pupils still contracted; the extremities cold and covered with clammy perspiration; and dissolution was apparently so near, that further efforts with hope of success seemed useless.

A flannel cloth saturated with aqua ammoniæ was now applied to the spine, and artificial respiration continued one hour longer, when normal respiration was resumed, and with it was noticed a gradual return of consciousness. The following morning his consciousness was perfect, although there was extreme nervous exhaustion, great mental depression, vomiting, loathing of food, etc., from which the patient gradually, but slowly, recovered. In the course of the day, an ounce bottle labelled laudanum, a few drops of which it still contained, was found concealed in the chimney flue, behind the damper. It was also ascertained that the patient had recently met reverses in business, and was laboring under pecuniary embarrassments, which doubtless induced that species of "moral insanity" that led him to contemplate suicide.

The points of interest in this case are, first, the manner of performing artificial respiration, which was in accordance with the directions of Dr. Marshall Hall, contained in the *London Lancet*, for recovering persons asphyxiated by drowning, viz: by placing one hand upon the inferior and lateral portion of the chest, and the other upon the superior portion or shoulder, and rolling the patient upon the face, at the same time making moderate pressure, to force the air from the lung; the body was then rolled back, completing about one third of a circle. This was repeated slowly, sixteen times to the minute.

#### DR. MARSHALL HALL'S RULES.

1. Treat the patient *instantly, on the spot, in the open air*, freely exposing the face, neck and chest to the breeze, except in severe weather.

2. Send with all speed for medical aid, and for articles of clothing, blankets, etc.

##### *I.—To Clear the Throat.*

3. Place the patient gently on the face, with one *wrist* under the forehead; [all fluids and the tongue itself then fall forward, and leave the entrance into the windpipe, &c.]

##### *II.—To Excite Respiration.*

4. Turn the patient slightly on his side, and
  - (i.) Apply snuff or other irritant to the nostrils;
  - (ii.) Dash cold water on the face previously rubbed briskly until it is warm.
 If there be no success, lose no time, but—

##### *III.—To Imitate Respiration.*

5. Replace the patient on his face, supporting the chest on a folded coat or other article of dress.

- a. Turn the body very *gently*, but completely, *on the side and a little beyond, and*

then *briskly* on the face, alternately; repeating these measures deliberately, efficiently, and perseveringly, fifteen times in the minute *only*.

[when the patient reposes on the thorax, this cavity is compressed by the weight of the body, and expiration takes place; when he is turned on the side, this pressure is removed, and inspiration occurs.]

7. When the *prone* position is resumed, make equable but efficient *pressure*, with friction, *along* the back; removing it immediately before rotation on the side;

[the first measure augments the expiration, the second commences inspiration.]

All these movements are performed systematically by the *same* individual.

#### IV.—*To Induce Circulation and Warmth—*

continuing these measures:

8. Rub the limbs *upwards*, with *firm pressure* and with *energy*, using handkerchiefs, etc.;

[by this measure the blood is propelled along the veins toward the heart.]

9. Replace the patient's wet clothing by such other covering as can be instantly procured, each bystander supplying a coat or a waistcoat.

Meantime and from time to time—

#### V.—*Again,—To Excite Inspiration—*

10. Let the surface of the body be *slapped* briskly with the hand;

11. Or, let cold water be *dashed* briskly on the surface previously rubbed until it is dry and warm.

The measures formerly recommended and now rejected by me are,—the *removal* of the patient, as involving dangerous loss of time; the *bellows* or any *forcing* instrument, and especially the *warm bath*, as positively injurious; and the *inhalation* of *oxygen*, as useless.

The inhalation of dilute pure *ammonia* has in it more of promise.

The value of galvanism remains to be tested: can it excite the action of the *heart*, or stimulate the muscles of *inspiration*; or, by inducing contraction of the muscles of the limbs, propel the blood along the *veins*?—*London Lancet*, Dec. 12.

The greater success which attends this mode of performing artificial respiration, Dr. Hall attributes to the fact, that when the body is placed in the prone position, the tongue falls forward, while in the old method, with the patient in the supine position, it falls back into the throat, closing the glottis, and entirely preventing the ingress of air to the lungs.

The second point of interest is the manner of making dry friction of the extremities upwards along the course of the veins, forcing the blood towards the heart, as directed by Dr. Hall, the beneficial effects of which were too apparent to pass unnoticed.

The third point of interest is the length of time during which it was found necessary to keep up artificial respiration, it being full five hours and a half. From the partial examination which I have been able to make, I think it unusual for persons to rally who have been so thoroughly overcharged with narcotic poison, as to create the necessity for the continuance of artificial respiration so long a time. The details of but few cases are recorded, and I have noticed no instance in which artificial respiration was successfully performed for a longer period than four hours.

Dr. Peaslee remarked that this case of Dr. Lewis' was an extremely interesting one, as it is the first instance among us in which a practical application of Dr. Hall's method had been made. He considers this an improvement possessing advantages over all other

methods of treatment, as we can by it introduce a greater quantity of pure atmospheric air into the lungs than by any other means, it being three-fourths as much as in normal respiration. Another advantage is that we have the means of operating always at hand, and the treatment may be pursued as well in one place as in another, while other methods are subject to more or less delay in providing the necessary means. Each moment of delay is fraught with imminent peril to the patient. In restoring persons from drowning there is no time to be lost, for as long as the asphyxia continues the patient is in nearly as much danger as if he were still in the water; hence the necessity of prompt and energetic action. He is inclined to think favorably of the application of cold to the head, and heat to the extremities. If the pathology is congestion of the medulla oblongata, preventing impressions being conveyed through the pneumogastric nerve, our course should be to remove this congestion. He has made use of this treatment in cases of children poisoned with meadow parsley, and always with prompt effect. The medulla oblongata being the centre of the respiratory movements when it is disabled by congestion we should, in addition to removing the congestion, continue our efforts at artificial respiration until the cord resumes its function. Acting upon this principle, it would seem in theory, that if artificial respiration was continued long enough, these patients would all recover.—[*N. Y. Journal of Medicine.*

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*Raw Pork as an Aliment.*

"Dr. Henry J. Bowditch gives, in a late number of the Boston Medical and Surgical Journal, a short account of a trip on the Penobscot, and tells us that the party were, for a time, forced to live on pork. From the guides he learned that the raw pork was considered much more nutritious, that it was much the most economical way of using it, and that those who ate it thus would resist the fatigue of the journey for a greater length of time. The custom is to cut the pork in very thin slices, and one or two drachms of a meal was sufficient."

We would be glad, did time and space permit, to make the above, from the New Orleans Medical News and Hospital Gazette, the occasion of extended remark; but as a substitute for these, we here collect a few of the opinions in relation to the subject, which come under our observation daily while engaged in collecting matter for our Lectures on Comparative Anatomy in the Medical College of Georgia. In doing so, we leave the reader to draw the plain inferences in regard to the Hygienic influence of the course hinted at, though not recommended, by the Boston Medical and

Surgical Journal, on whose article the short comment is made. We refer, of course, to the pernicious practice of feeding upon raw meat, especially in a Southern climate.

When we read the following, from which we learn not only the immense fecundity, but also the great tenacity in the lives of these parasites, we cannot but be thoroughly penetrated with the conviction that it is of the first importance that our animal food, or at least some kinds of it, should be *thoroughly cooked* before entering our alimentary organs.

We copy first from *Prof. Owen's Lectures on Comparative Anatomy of Invertebrate Animals*:—

"The ancient philosophers styled man the microcosm, fancifully conceiving him to resemble in miniature the macrocosm or great world.

"Man's body is unquestionably a little world to many animals of much smaller size and lower grade of organization, which are developed upon and within it, and exist altogether at the expense of its fluids and solids.

"Not fewer than eighteen kinds of parasitic animals have been found to infest the internal cavities and tissues of the human body; and of these, at least fourteen are good and well established species of Entozoa." (Lect. IV., p. 57.)

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"The evidence of the fertility of the compound cestoid Entozoa was sufficiently marvellous. That which I have now to adduce, from a calculation made by Dr. Eschricht in reference to the *Ascaris lumbricoides*, the commonest intestinal parasite of the human species, is scarcely less surprising. The ova are arranged in the ovarian tubes like the flowers of the plantago, around a central stem or rachis. There are fifty in each circle; that is to say, you might count fifty ova in every transverse section of the tube. Now the thickness of each ovum is 1.500 of a line, so that in the length of one line there are 500 wreaths of fifty eggs each, or 25,000 eggs! The length of each ovarian tube is sixteen feet, or 2,804 lines, which, for the two tubes, gives a length of 4,608 lines. The eggs, however, gradually increase in size, so as to attain the thickness of  $\frac{1}{16}$  of a line; we therefore have, at the lower end of the tube, sixty wreaths of ova, or 3,000 ova in the extent of one line. The average number, through the whole of the extraordinary extent of the tube, may be given at 14,000 ova in each line, which gives *sixty-four millions* of ova in the mature female *Ascaris lumbricoides*!

"The embryo is not developed within the body in this species: the ova may be discharged by millions; and most of them must, in large cities, be carried into streams of water. An extremely small proportion is ever likely to be again introduced into the



alimentary canal of that species of animal which can afford it an appropriate habitat. The remainder of the germs doubtless serve as food to numerous minute inhabitants of the water; and the prolific Entozoa may thus serve these little creatures in the same relation as the fruitful Cerealia in the vegetable kingdom stand to higher animals, ministering less to the perpetuation of their own species than to the sustenance of man." (Lect. VI., p. 110.)

And in another place he remarks:

"Both, however, (the *Bothriocephalus* and *Tænia*,) agree in presenting the most extensive development and preponderance of the generative system that is known in the Animal Kingdom. In fact there is scarcely space left in the hinder joints of the tape-worms for the organs of any of the other systems."

"It has been proved that the mature Entozoa will resist the effects of destructive agents, as extremes of heat and cold, to a degree beyond the known powers of endurance of the Rotifera, and which would be truly surprising were not the simplicity of the organization of the Entozoa taken into account. A nematoid worm has been seen to exhibit strong contortions—evident vital motions—after having been subjected above an hour to the temperature of boiling water, with a codfish which it infested; and, on the other hand, Rudolphi relates that the Entozoa of the genus *Capsularis*, which infest the herrings that are annually sent to Berlin, hard frozen and packed in ice, do, when thawed, manifest unequivocal signs of restored vitality. If, then, the fully developed and mature Entozoa can resist such powerful extraneous causes of destruction, how much more must the ova possess the power of enduring such without losing their latent life."

We find in the Eclectic Magazine, March, 1857, p. 298, the following, from the London Review. It is given in a review of Dr. Carpenter's recent work "The Microscope and its Revelations." As it contains much of both interest and instruction, we copy it in accordance with the principles of our motto—"Je prends le bien où je le trouve."

"Some extraordinary facts connected with the life of intestinal worms (Entozoa) have until recently perplexed orthodox philosophers: one especially anomalous example being more puzzling than the rest. A few examples of a curious worm, the *Cysticercus oculi humani*, have at long intervals been found in the anterior chamber of the human eye. From the size of the animal it is almost impossible that it should exist in any man's eye without attracting his attention; and, from the inconvenience such a guest would occasion, it is equally improbable that the case would fail

to reach some medical man who, from its extreme rarity, would place it upon record in the medical journals. But, as just observed, the creature only appears on rare occasions. Dr. Mackenzie, of Glasgow, removed one from the eye of a patient some twenty-five years ago; and we believe that a second, which came under our notice a few years since, ultimately reached the same experienced oculist. The question for solution is an obvious one. How could such creatures be transmitted by the ordinary methods of multiplication? Even had the successive instances occurred in members of one family, (which they did not,) it would be difficult to explain the preservation and transmission of the ova from one individual to another, at the same time leaping over a quarter of a century, "Lineal succession," say the advocates of spontaneous generation, "is here out of the question;" and it was not very easy for their opponents to explain the anomaly.

"But not content with asserting the anomalous origin of this Entozoon, and its independence of the ordinary laws of reproduction, the attempts was made to invest the heresy with an atmosphere of philosophy, by advancing an hypothesis accounting for the origin of such objects. Recognizing the vitality of each part of man's animal organism, they contended that some portions of his frame could become detached from the rest without losing their inherent life; and that, after their separation, they became developed into independent creatures, endowed with all essentials of individual animals. The supposition was not wholly devoid of support from anomalous things occurring elsewhere; but the true history of the entire race of Entozoa has recently been studied by several continental naturalists, especially M. Seebold; and by his masterly investigations the fallacy has been thoroughly exploded.

"It appears, from these researches, that the Entozoa, or intestinal worms, pass the early part of their life in the body of one animal, but complete their existence in that of some wholly different species. Thus, the tapeworm found in the alimentary canal of the human subject, spends its early, larval life in the liver, brain, or other organs of some of the lower animals on which he subsists,—especially the sheep and the pig. A similar worm, found in the cat, commences its existence in the body of the rat and the mouse; while the parasite of the dog spends its youth in the interior of the rabbit and hare. The larval forms occurring in these animals have long been known and described as so many distinct species, their very close relation to the tapeworm being wholly unsuspected; but now their history is clear enough. The perfect worm can alone produce eggs, which it does in vast numbers, but which undergo no further development in the intestine of the animal in which the worm resides. They are conveyed along with the manure to pastures; their marvellous vitality enabling them to survive the accidents of flood and field. Sooner or later they are taken up by some of the grazing quadrupeds along with their

vegetable food, and are thus transferred to the animals stomachs, where warmth and moisture quicken them into active life. The germs now escape from the eggs, and become small worm-like larvæ, each with a bladder at its tail, and a circlet of cutting-hooks at its head. By means of the latter they penetrate the various tissues of the animal's body; some reaching the brain, some the liver; whilst there is nothing to prevent an odd wanderer from reaching any part of the body which is their temporary home. In this stage, as well as in the earlier one of ova, these objects marvellously resist destructive agencies. They accompany the sheep's head into the pot, and lurk in the mutton frizzling in the pan; but, phoenix-like, they often survive the ordeal. The digestive powers of living stomachs fail to digest *them*. The cat eats rats and mice; the dog consumes the wild animals of the field and the offal of the shambles; man enjoys his mutton and his pork, and the tapeworm larvæ find their way to a resting-place. Their further development is now completed; they produce eggs by untold myriads; the cycle of worm-life has been run, and with the ova commences a new generation.

"How much is to be learned from this history! In the first place it gives spontaneous generation its death-blow. *Cysticercus oculi humani* is no larger a marvel. The two men referred to had eaten the larvæ along with their pork or mutton, as myriads have done, are doing, and will do, to the end; but the larvæ they consumed, instead of remaining in the bowel, had, by a rare accident, found their way to the interior of the eye, where they were seen as well as felt, and consequently attracted notice. Had they remained in the alimentary canal, they would merely have grown unobserved into tapeworms. What they would have become, had they not been removed by operation from the visual organ, it is impossible to say. Their limited accommodation might have arrested their development, and compelled them to remain larvæ, as tadpoles are said to continue tadpoles when excluded from the light.

"A practical idea is also suggested by these discoveries. It is known that the rot in sheep, and similar diseases in cattle, arise from the presence of these *cysticerci* and their allies, these worm larvæ, in the bodies of the affected animals. The dog is, in all probability, the active agent in diffusing the multitudinous germs of these pests of the agriculturist. It has been observed that cattle fed in stalls and pens, dispensing with the aid of dogs, are less liable to such affections than those reared in the open plain; and as the dog appears to play his part in diffusing the noxious germs, the propriety of dispensing with his services at once suggests itself. By so doing the grazier will materially improve his chance of escaping the rot and similar evils. As for us poor bipeds, we cannot subject all the contents of our larder to microscopic inspection in chase of *Cysticerci* and *Echinorhynchi*—nuisances with

armed heads and ugly names. Our only resource is to avoid half-cooked meats. We must see that the cook sufficiently roasts the mutton, or risk being plagued by the doctor with his armoury of turpentine, koussou, and oil of male fern."

H. F. C.

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*Galactirrhœa—its Treatment, etc.* By J. W. BEECH, M.D., of Cold-water, Mich.

Writers upon the peculiarities of the human female and her specific diseases, seem to have paid but little attention to the causes, effect and treatment of redundant lactiferous secretion. Although by no means a common deviation from health, its occasional occurrence, the grave results which accompany its march, or follow in its wake, and sparsity of authority in the current medical literature, afford sufficient excuse for our penning a few remarks upon the subject. Regretting that we have not at hand a more extensive collection of works, in which we should expect to find the disorder fully treated, we are aware that we hazzard much among the more favored, who may have elaborate and practical treatises at command. Professional duty has frequently required us to investigate its practical bearings, and, oral inquiries from some professional friend, encourage me in this communication. Excessive lactation may make its appearance in the latter months of pregnancy. If profuse it seriously impairs the energy of the "*enciente*," increasing itself from the want of exercise, and seclusion, to which young and sensitive females are apt to resort, in fear of the caustic tongue of gossip. Impassioned connubial fondling may be the exciting cause; and abstinence—a sufficient remedy. Even in this case, if the secretion has been copious for some weeks, it may require medication, very similar to that applicable *post partum*. Venesection is frequently important, which we have not deemed requisite after delivery. Neither do we advise stimulating topical applications, as we shall propose in *passive galactirrhœa, post partum*, lest the uterus be sympathetically aroused to contraction. We have ventured to paint the upper half of each mamma with tr. Iodine, once in 24 or 48 hours, with none but good effects. Antiphlogistic dietetic regimen, abundance of exercise in open air, mild hydragogue cathartics; "*et id omne genus*," are generally indicated at first, and in full habits. Later, tonics and astringents may be prescribed, some of which will be hereafter named.

After delivery, this difficulty seldom presents itself in a noticeable degree, until after the first week, or upon the cessation of the lochia. The grand panacea *mammæ*, of Prof. Dewees—vinegar and water, at low temperature—is our first, and often only remedy. If the lochia have suddenly ceased, and there is inordinate arterial action, *venesection* would be safer than to run the risk

of another metastasis of excitement. Brisk cathartics, tepid coxæ-luvia, stimulating pediluvia, fomentations to the abdomen, sinapisms to the lumbar and sacral regions, or to the inner sides of the thighs, naturally come to the mind as important adjuvants. Sinapisms should not remain on one place more than 20 or 30 minutes, but may be repeated three or four times a day. Restricted diet, and cold water or ice, to quench thirst, are equally important. When the patient "has gained the feet," the physical annoyance of wet and souring clothes, etc., may be sufficient to induce a call for the attention and advice of a physician, while all other functions are normal. The clothing over the breast should be arranged in the coolest and lightest possible manner, as much exercise by walking as can be endured, and one of the following pills may be taken before the morning and evening walk:

R. Scillæ Mar. Pulv., grs. vj.

Antimoni Tartarizati, ij.

Syrup. qs. Fiant pil. No. xxiv.

By these means, other organs may be excited to the relief of the mamma, and when the necessity for their extra secretion has ceased, they will more readily correct themselves than those newly called into functional life. It is remarkable what an amount of rich, nutritious material will flow from the breasts of some wasted women, whose emaciated and wasted limbs can scarcely sustain their own weight, or hold the *infantissimus*, who preys upon their vitality. The actual demands of the offspring by no means limit the supply. Cloths, glasses, sponges, and manipulations ("trayant") must be resorted to, for purposes of cleanliness and partial comfort; while constipation, anuresis, excessive thirst and epithelial lesions with their attendant evils, render life miserable and doubtful.

This *cause* of debility is often entirely overlooked, or the changes in the secretion mistaken for the effect, and much time and strength wasted in futile attempts to restore other functional derangements without restraining this, until, in despair, the infant is weaned; when, if cachexia is not too far established, gradual reparation occurs.

We have mentioned changes in the lactiferous secretion, and it is not often that it continues of perfect quality, in galactorrhœa. The attenuated limbs, and *venter tumescens* of the recipient prove it deficient in alimentary compounds. Casein, butter, and sugar, are not in proper proportion to each other, or to the serum. In the absence of positive analyses, we can only presume (and we think safely) that the lacteal fluid resembles that of pregnancy and menstruation; and which have been described with so much care and skill, by Dr. N. S. Davis, in his report to the "American Medical Association," upon changes in the composition of the milk of the human female, produced by menstruation and pregnancy, &c. Well directed efforts to guide fluid excrements to

their proper outlets, at the same time restraining lactation, as suggested before, early in the attack, will often succeed to entire satisfaction.

In the treatment of a more obstinate case, according to the various derangements which may have resulted, nearly the ordinary "therapeia" are required; the varieties of which, it would be supererogation to suggest. Care must be taken lest the mammæ convert all to the use of the child. Cool applications, used steadily, so as not to produce shock, or encourage reaction; systematic counter-irritation, adroitly managed for revulsive effect; and diet apportioned in quantity and quality, to the existing physical, or pathological condition of the patient, and her lacteal secretion, are "*sine qua non*." Exercise and mental diversion are not less important than for other valetudinarians, *Coitus interdiceretur*. The family physician should not see a mother losing too much of her usual rotundity, without giving warning of the danger, investigating the cause, and advising proper hygienic regulations. The people seldom suspect the amount of mischief which may result from hyper-secretion, and are not aware of its amenability to control.

Gallic acid and decoction of Statice, have given us much satisfaction as internal remedies for specific action, before debility has become marked. The latter is also one of the most valuable washes in *stomatitis nutriti*, which, as we have hinted, often results from galactirrhœa. In the passive forms of this affection, astringent, tonic, and gentle stimulants must be used with care to prevent constipation. *Acid Sulph. Aromaticum*, or the acid saline solution cum quinia, are most valuable remedies. Ferruginous preparations are frequently, but we think not always, indicated. We were formerly partial to Tinct. Ferri. Muriat, but it is more apt to meddle with other functions than Ferri. Sulphas. "Liquor Potass. Arsenitis," largely diluted with syrup or aqua destillata, has given us much satisfaction as an alterative tonic in inveterate cases.

When the stomach has become extremely irritable, cold infusion of gentian will generally be borne and produce tolerance of more active tonics, stimulants and food. Argent. Nitras, with Ext. Conii, in pills, and where acidity prevails, Heberden's prescription in Commentary on "*Linguae et Oris Dolor*," are well adapted. ("R. Testæ Ostr. ʒ. ss., Rad. gentianæ gr. iv., Hier. picr. gr. ss., morning and evening.")

The food must be varied according to circumstances, but should not consist of many kinds compounded. Animal jelly, albumen and fibrine in the most available forms for feeble assimilative organs, with but little drink, and that cold. But few condiments will be borne. If the stomach will bear it, a small quantity of cream cheese will be better than butter. Topical applications, in the form under present consideration, may be of more stimulating

kinds. Tr. Iodine, applied with C. hair pencil twice a day. Solution of Ammonia Murias, in diluted vinegar, or bay rum, with lint or cloths; Camphor plaster, (B. Mel. Rosæ ʒ. j.; Camph. Pulv. ʒ. ij. Misce.) to be spread on leather to fit one-half of each breast. Hot pediluvia, sinapisms to the sacrum and feet, or resinous plaster worn in the hollows of the feet are good derivatives.

Bathing, frictions to the general surface, and all other measures to encourage capillary circulation, have no less influence than in other abnormal conditions. We cannot think that the use of narcotic extracts or lead lotions is safe for either mother or child, unless watched more closely by competent medical attendants than is usually convenient.

Belladonna has been recommended by high authority, but in hyperæmia it is far inferior to many safer remedies, and in anæmia or passive galactorrhœa, its usual specific action would be contra-indicated.

When the infant has been removed from the patient entirely, there is less objection to the use of Belladonna, or leaves of Stramonium, from which we have seen great relief.—[*Peninsular Jour. of Medicine*.

#### *Case of Gastrotomy.*

Dr. John H. Bayne of Prince George county, Maryland, reports a successful case of Gastrotomy in a robust servant woman, 25 years of age, in labor with her fourth child. Her pelvis was evidently contracted, and her labors had been lingering from this cause. She had now been in labor for two days, and Dr. B. was sent for, and told that the patient had experienced some hours before an excruciating pain in the epigastrium, accompanied with a peculiar tearing sensation; followed by entire cessation of pain, and expulsive uterine efforts; pulse 130, dyspnoea and prostration; os uteri fully dilated, vertex presenting, and high up. She soon became comatose, with great tendency to collapse. Head of foetus seemed to be rapidly receding, and in a very short time the entire contents of the uterus escaped into the peritoneal cavity; child then felt distinctly through abdominal parietes, so high up as to interfere with the action of the diaphragm; vaginal examinations now recognized laceration through the fundus. The Doctor selected the operation of gastrotomy, and performed it promptly, without an anæsthetic. He divided the parietes from the umbilicus to near the pubes through the linea alba down to the peritoneum. This was cautiously opened, when a quart of sero-sanguinolent fluid gushed out. No hæmorrhage, but a large foetus which was removed with great despatch. No particular allusion to the placenta made. Wound united with interrupted sutures, and complete cicatrization took place in twelve days, notwithstanding

symptoms of sharp peritonitis. For several weeks, a dark, grumous, purulent, offensive discharge flowed from the vagina, unaccompanied by constitutional disturbance.

In two months time she resumed her duties as cook.—[*American Jour. of Med. Sciences.*

*Sciatica.*—The severe pains of this and other forms of neuralgia are relieved by the endermic use of morphia. The plan of use advised is, to apply a small blister the size of a quarter to a half dollar. Vesication being produced, the skin is removed, and the surface sprinkled over with a half grain to a grain of morphine mixed with powdered white sugar. The application may be repeated two or three times a day for six or seven successive days, the blister being kept open by irritating dressings. The proper constitutional treatment being used, this remedy is said to have relieved a large majority of the cases of sciatica in which it has been tried. The blister is drawn as near to the seat of pain as possible.—[*Memphis Med. Recorder.*

## EDITORIAL AND MISCELLANEOUS.

**MEDICAL COLLEGE OF GEORGIA.**—The Dean's Report, given below, develops a most encouraging condition in the affairs of the Medical College of Georgia. We have still continued to hold well our own—even in the multiplication of medical schools throughout the country. In a review of our whole history there is little presented to give rise to discontent or regret, and much to incite gratitude and heartfelt gratulation. Our Alumni every year increasing, both in number and influence, are among our best reliances for the continuation of that gratifying success which we have enjoyed for more than a quarter of a century.

While we look with serene satisfaction upon our own happy condition, we here sincerely protest that we are free from any feeling of jealous regret at the success of other Institutions. There is, we confess, a proper feeling of competition among us, but none of rivalry or detraction: we wish all success, and will ourselves endeavor to command our portion of it.

The Faculty report to the Trustees of the Medical College of Georgia that there were in attendance on the Course of Lectures which has just terminated, One Hundred and Sixty Students—of whom one hundred and five were from Georgia, twenty from South Carolina, twenty-seven from Alabama, three from Mississippi, three from Texas, one from Tennessee, and one from Florida. The Faculty are pleased to state that the general department of the Class was unexceptionable, and that the examinations gave satisfactory evidence of their strict attention to their duties. The



Faculty take great pleasure in asking the Trustees to confer the Degree of Doctor of Medicine upon the following named gentlemen—viz :

|                    |                 |                    |                |
|--------------------|-----------------|--------------------|----------------|
| W. L. Coleman,     | of Mississippi. | L. B. Hatcher,     | of Georgia.    |
| W. N. Bush,        | " Georgia.      | M. J. Jones,       | " "            |
| E. M. Divine,      | " Mississippi.  | F. Z. Hill,        | " "            |
| C. A. Denson,      | " Alabama.      | T. K. Mitchell,    | " "            |
| G. M. Etheridge,   | " S. Carolina.  | Thomas De Witt,    | " "            |
| David Hudson,      | " Georgia.      | J. A. S. Todd,     | " S. Carolina. |
| J. W. Brown,       | " Mississippi.  | H. T. Heard,       | " Georgia.     |
| W. D. Cheney,      | " Georgia.      | Thomas E. Wood,    | " S. Carolina. |
| W. W. Lowman,      | " S. Carolina.  | J. M. Burns,       | " Alabama.     |
| A. J. Sanders,     | " Georgia.      | Wm. A. O'Hara,     | " "            |
| W. M. Standley,    | " "             | Henry J. Long,     | " Georgia.     |
| W. W. Pitts,       | " "             | J. M. Boring,      | " "            |
| James Wilson,      | " S. Carolina.  | B. P. White,       | " Alabama.     |
| J. A. Thomas,      | " Georgia.      | S. H. Lamar,       | " Georgia.     |
| J. K. Price,       | " S. Carolina.  | J. C. Reese,       | " "            |
| J. A. Stewart,     | " Georgia.      | D. F. Dickinson,   | " "            |
| F. W. Cullens,     | " "             | J. T. De Jarnette, | " "            |
| W. H. Henry,       | " S. Carolina.  | D. W. Marks,       | " "            |
| M. J. Dudley,      | " Georgia.      | J. E. Meadors,     | " Alabama.     |
| A. E. Hunter,      | " "             | B. C. Cook,        | " Georgia.     |
| C. J. Saunders,    | " "             | L. J. Lewis,       | " Alabama.     |
| L. B. Bouchelle,   | " S. Carolina.  | Reuben De Jernett, | " Texas.       |
| J. N. Cheney,      | " Georgia.      | C. C. Schley,      | " Georgia.     |
| E. U. Tison,       | " "             | A. M. Boyd,        | " "            |
| J. N. Lawrence,    | " S. Carolina.  | J. W. Walker,      | " "            |
| J. W. Gairdner,    | " Georgia.      | M. R. Ballenger,   | " "            |
| W. A. Merriwether, | " "             | R. H. Eaton,       | " "            |
| G. G. Coker,       | " S. Carolina.  |                    |                |

John Venable, M.D., of Jackson Co., Georgia, was admitted *adeundem gradum*.

All of which is respectfully submitted.

I. P. GARVIN, M. D., *Dean pro. tem.*

Medical College of Georgia, March 3rd, 1857.

MEETING OF THE MEDICAL SOCIETY OF THE STATE OF GEORGIA.—We introduce the following, in order to remind the several Committees and appointees of the various duties assigned each, and which are to constitute the work of, and to give interest to, the approaching meeting on the second Wednesday of this month (April) in this place—Augusta. We cannot add anything more to what we have already said ; but we repeat, that we would urge, most earnestly, our friends at a distance to come, and their brethren here will give them a hearty welcome :

"The Committee on Business, consisting of Drs. Dugas, Green, Kollock, Flewellen and Way, reported the following subjects and essayists, for the next annual meeting :

1st. Dr. P. M. Kollock—On the Treatment of Vesico-vaginal Fistula.

2nd. Dr. J. G. Westmoreland—What is the difference between the "Country fever" of the sea-board, and the Remittent fevers of the middle counties of Georgia ?

3rd. Dr. H. F. Campbell—Are there any means by which the extension of Yellow fever in the interior may be prevented ?

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- 4th. Dr. Joseph A. Eve—On the Diseases of the Cervix Uteri.  
 5th. Dr. L. D. Ford—On the Connexion of Pneumonia with Remittent fever.  
 6th. Dr. C. B. Nottingham—On the Diseases of the Spinal Marrow.  
 7th. Dr. F. C. Ellison—On the Relation of Epidemic Dysentery to Malarial fevers.  
 8th. Dr. W. M. Chartres—On the Relation of Acute Meningitis to Malarial fevers.  
 9th. Dr. E. F. Way—On the Pathological difference between Acute, Articular and Chronic Rheumatism.  
 10th. Dr. Ira E. Dupree—On the Treatment of Prolapsus Uteri.  
 11th. Dr. Ebon Hillyer—Under what circumstances is Trepanning justifiable?  
 12th. Dr. J. M. Green—On the Value of Escharotics in the Treatment of Cancer.  
 13th. Dr. R. D. Arnold—The Pathology and Treatment of Erysipelas.
- The selection of Orator for the next annual meeting being next in order, Dr. G. F. Cooper was unanimously elected, and Dr. R. C. Mackall his alternate.
- The City of Augusta was selected as the next place of meeting. The Committee of Arrangements are Drs. Campbell, Harris, Doughty, Walton, and Phinizy.
- At a late hour, on motion, the Society adjourned, to meet again at 10 o'clock A. M., on the second Wednesday in April, 1857, in the city of Augusta.
- F. C. ELLISON, Rec. Sec'y, pro. tem."
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**THE AMERICAN MEDICAL ASSOCIATION.**—We find in the Nashville Journal of Medicine and Surgery the following which we present to our readers, and hope they will embrace the opportunity now offered them of attending this Medical Congress of their nation, at the time when the place of meeting is so accessible.

"The tenth meeting of the Association will be held at Nashville, on Tuesday, May the 5th, 1857.

"All bodies entitled to representation in the Association, would very much further and facilitate its affairs by sending lists of their representatives at an early period to the undersigned."

#### ARTICLE SECOND OF THE CONSTITUTION.

"The members of this Institution shall collectively represent and have cognizance of the medical profession in every part of the United States, and shall hold their appointment to membership either as delegates from local institutions, as members by invitation, or as permanent members.

"The Delegates shall receive the appointment from permanently organized medical societies, medical colleges, hospitals, lunatic asylums, and other permanently organized medical institutions in good standing in the United States. Each delegate shall hold his appointment for one year, and until another is appointed to succeed him, and shall participate in all the business and affairs of the Association.

"Each local society shall have the privilege of sending to the Association

one delegate for every ten regular resident members, and one for every additional fraction of more than half this number.

"The faculty of every regularly constituted medical college, or chartered school of medicine, shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hundred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate.

"*The Members by Invitation* shall consist of practitioners of reputable standing, from sections of the United States not otherwise represented at the meeting. They shall receive their appointment by invitation of the meeting, after an introduction from any of the members present, or from any of the absent permanent members. They shall hold their connection with the Association until the close of the annual session at which they are received, and shall be entitled to participate in all its affairs as in the case of delegates.

"*The Permanent Members* shall consist of all those who have served in the capacity of delegates, and of such other members as may receive the appointment by unanimous votes.

"Permanent members shall at all times be entitled to attend the meetings, and participate in the affairs of the Association, but without the right of voting; and when not in attendance, they shall be authorized to grant letters of introduction to reputable practitioners of medicine residing in their vicinity, who may wish to participate in the business of the meetings, as provided for members by invitation.

"Every member elect prior to the permanent organization of the annual meeting, or before voting on any question after the meeting has been organized, must sign these regulations, inscribing his name and address in full, specifying in what capacity he attends, and if a delegate, the title of the institution from which he has received his appointment."

Resolutions passed at the eighth meeting of the Association, held at Philadelphia:

"*Resolved*, That no State or local society shall hereafter be entitled to representation in this Association that has not adopted its code of Ethics.

"*Resolved*, That no State or local society that has intentionally violated or disregarded any article or clause in the code of Ethics shall any longer be entitled to representation in this body.

"*Resolved*, That no organization or institution entitled to representation in this Association, shall be considered in good standing which has not adopted its code of Ethics."

Resolution passed at the ninth meeting, held at Detroit:

"*Resolved*, That any new medical institution not heretofore represented in this body, be required to transmit to the Secretary, with the credentials of its delegates, evidence of its existence, capacity and good standing."

Medical presses throughout the Union are respectfully requested to copy the above resolutions at their earliest convenience.

ROBT. C. FOSTER,  
Secretary Amer. Med. Ass., Nashville, Tenn.

The following Letter, which we here present to our own readers, was prepared for, and has been communicated to THE LONDON LANCET:

**A CLAIM OF PRIORITY IN THE DISCOVERY OF, AND ALSO THE *naming* OF THE EXCITO-SECRETORY SYSTEM OF NERVES.** BY HENRY FRASER CAMPBELL, M. D., of Augusta, Georgia, U. S. A., Member of the American Medical Association, Professor of Comparative Anatomy, &c., in the Medical College of Georgia, and Senior Editor of the Southern Medical and Surgical Journal.

EXCITO-SECRETORY SYSTEM OF NERVES. LETTER TO DR. MARSHALL HALL, of London.

AUGUSTA, GEORGIA, U. S. A., March 2nd, 1857.

TO MARSHALL HALL, M. D., of London, F. R. S., &c.

*My Dear Sir*—In the number of the London Lancet republished in this country, for March, 1857, (present month,) I have just read a paper from your distinguished pen; and in this paper you *announce* a system of EXCITO-SECRETORY nerves, in the following connection and in the following terms:

“In a memoir read at the Royal Society in February 1837, I announced the existence of an EXCITO-MOTORY system of nerves.

“I believe I may now announce a system or sub-system of EXCITO-SECRETORY Nerves, not less extensive.”

As the above announcement is here made in close relation with a discovery long admitted to be your own—viz., that of the EXCITO-MOTORY system of nerves, and inasmuch as in your subsequent remarks, you attribute the proposition to no one else, I am left to infer that it is deemed by you an original deduction from the admitted facts of Anatomical and Physiological Science, as developed by observations and experiments during the last and the present century. Some of these last—viz., the Experiments of Mons. Claude Bernard, of Paris—you adduce with the apparent intention of fortifying the views you here express.

Finding in none of your communications upon this interesting topic, any mention made of my name or of my records, I am, with regret, impelled, from considerations of courtesy to you and of justice to myself, to call your attention to the registration of my own labors in the same important field. I will, however, first direct you particularly, though briefly, to several portions of your own communication, in order that they may be placed in convenient juxtaposition with my own records, without giving the trouble of each time referring to the pages of the Lancet:

“But the most remarkable proof of the doctrine which I am endeavoring to unfold is furnished by the brilliant discovery and skillful experiments of M. Cl. Bernard”—

And you here refer to his well known experiments on the Pneumogastric nerve in its relation to the secretions of the Liver, published in his Lectures on Experimental Physiology, during the winter session of 1854 and 1855.\*

In the earlier part of your communication (March, 1857) you thus announce the addition of this, as you suppose, *new* sub-system, to what you term the "Diastaltic Nervous System," the term "*henceforth*" apparently being used to date the initial moment of an era :

"*Henceforth* the Diastaltic Nervous System, must be divided into two sub-systems :

I. The Excito-motory.

II. The Excito-secretory.

"The former is extended to the entire muscular system ; the latter is diffused over the general system as the blood is diffused over the system."

Again, in reference to the *Pathological Relations* of the *Excito-secretory* system, you remark :

"The *Pathology* of the Excito-secretory sub-system remains to be investigated and traced. A partial keen current of air falling on *any* portion of the skin may induce inflammation in *any* susceptible internal organ. An extensive burn or scald is apt to produce pneumonia."

And as my last quotation for the present :

"But here I close this brief communication. My present object is only to draw the merest sketch of this vast subject which demands a most extensive and cautious series of experiments and observations. The efforts of many laborers, through many years, will be required fully to develop the two sub-systems of the Diastaltic nervous system.

"I propose shortly to treat this important subject at greater length and with more details."

Now, my dear sir, by a reference to the following series of records, running through a period of nearly seven years, you will at once perceive that the EXCITO-SECRETORY function of the nervous system has been the subject of earnest and diligent inquiry, and also of *plain record*, with me, for a length of time far anterior to that, at which either yourself or Mons. Bernard had published any thing on the subject.

You will herein also perceive, that this system of nerves has been plainly recognized and set forth as considered in its relations to *Pathology*, through which, indeed, its *Physiology* has been mainly deduced by me. And, lastly, that this system of nerves, before plainly stated and amply discussed, was, as early as May 5th, 1853, in the presence of the American Medical Association, the highest tribunal in the Medical Sciences within my reach,

\* *Leçon's de Physiologie*, p. 325. Paris, 1855.

publicly NAMED by me the EXCITO-SECRETORY : and that too in juxta position with and contradistinction to, your own discovery, viz., the EXCITO-MOTORY function.

This name or verbal combination, then for the very first time printed in the English language, or, indeed, in *any other* language, had not, so far as I can learn, after continued and interested inquiry on my part, been printed a second time, until taken from your own recent manuscript, it appears at the heading of your paper in the March number of the London Lancet, (American edition,) and thus becomes the occasion of the present communication.

Below, I now present you with certain passages from an article on "The Influence of Dentition in producing Disease," read before the Medical Society of Augusta, Georgia, in May, 1850, and afterwards published in this city, in the Southern Medical and Surgical Journal, a periodical circulating extensively and exchanging with all the medical journals in this country and with many of those of Europe. Here you will *now* find these several records presented to you seriatim and in that order, together with the dates and accompanying circumstances, in which they were *long ago* successively presented to the Profession.

May 2nd, 1850. "Dr. Henry F. Campbell read an Essay on the Influence of Dentition in producing Disease."—[*From Minutes of a meeting of the Medical Society of Augusta, Georgia.*"]

I will not quote from or remark upon the Essay now, but fully hereafter as published below.

June, 1850. Permit me now, respected sir, to refer you to the pages of the Southern Medical and Surgical Journal, (new series,) volume 6th, number 6, June, 1850. Part L.—Original Communications. Article XV., page 321. You will in this place find the paper just cited, published—viz: "An Essay on the Influence of Dentition in producing Disease. By Henry F. Campbell, M. D., Demonstrator of Anatomy in the Medical College of Georgia."

Here you will find that I have in the beginning, sketched prominently the two orders of phenomena which occur during the period of Dentition, viz., the *convulsive* and the *secretory*, explaining the first easily enough, by a reference to the principles of Excito-motory action laid down by yourself; while the other set of phenomena I presented in such a manner as that from them, the Excito-secretory function of the nervous system became an *obvious* and an *unavoidable deduction*—by this means mutually establishing a physiological principle before scarcely ever broached or hinted at; and in the second place, leaving no chance to escape the necessary admission that this set of phenomena, before perfectly inexplicable to the Profession, could only be rationally interpreted by the admission of that very

Physiological principle. In doing this, "the two sub-systems," as you now term them, were, throughout, kept in *close relation*, but in *decided contrast*, the one being used, occasionally it is true, to illustrate the other, but never for a moment becoming *confounded* with the other—thus: "*Now let us inquire how far these phenomena are dependent upon Dentition; and ANALOGY with the EXCITO-MOTORY system will much assist us in our argument.*" We have seen that local irritation can through this system, produce convulsions by the reflex function of the nerves, the sensitive branches of the fifth pair becoming excitator to the *motory spinal* nerves; and so, may we justly infer, do these same branches, under certain circumstances, become *excitor* to the SECRETORY filaments of the *sympathetic*, distributed so abundantly to the intestinal canal by a transmission of this irritation through the various ganglia with which it is connected."

You will also here see that the discussion is carried still farther into the pathological relations of the, then, new function, and that I have instanced nearly all those localities which you have recently adduced, and that I have considered those changes in the Blood while eliminating the secretions under nervous influence, which you, in your paper, designate by the word "*methæmatus*;" as in the following: "Thus the irritation at first produces simply an *exaltation* of the innervation of the secretory surfaces, and secretion is more *active* than normal, producing *simple diarrhœa*. A continuance of the irritation, *alters the character of the secretion* and we have the various morbid discharges observable during this period. This *increase and change* in the secretion are effected by the agency of the altered function of the nerve upon the arteries from which these secretions are eliminated."—(See Southern Medical and Surgical Journal, p. 381.)

Without further remark at present, I will lay before you that portion of this Essay which embodies my first record upon the Excito-secretory function of the nervous system.

"The period of Dentition has ever been regarded one of peculiar interest, as well to the pathologist as to the practitioner. That certain diseases are more apt to occur during this season, few pretend to deny; but the amount of the symptoms, due to the irritation of teething, has been variously estimated, some attributing to this cause nearly all the ills to which infancy is liable, while others ridicule the idea, that a process in itself so purely physiological and natural should be regarded *ever* a cause of disease.

"The object of our essay is to investigate impartially this important subject with the view of determining, as nearly as possible, to what extent the organism is affected by the evolution of the teeth. In doing so, it appears to us most rational, as a primary step in the investigation, to review briefly the phenomena of both normal and abnormal dentition, with the view of finding the foundation of the pathogenic theory, if such exists, in the *physiology* of this process.

"The phenomena observed during easy or normal dentition may be briefly summed up as follows:—The salivary secretion is increased, the gums are

swollen, the mouth hot, and the child evinces a disposition to press every substance within its reach upon the gums, in order to relieve the irritation it here suffers. Later, the gums become more swollen and softer, the irritation more distressing, and, under certain circumstances, the mouth dry and slightly inflamed. The child becomes fretful; its sleep is disturbed and feverish, its bowels become loose, which latter symptom we frequently observe accompanied by nausea and vomiting. There is also described by some authors an irritation of the schneiderian membrane, *with increased secretion*, marked by the child's rubbing its nose.

"Cases of anormal dentition are brought more frequently under the cognizance of physicians, and their phenomena are hence familiar to every one. The above symptoms become exaggerated—some, which in normal dentition were of trivial importance, becoming so severe as to threaten the life of the patient. Thus the gently relaxed condition of the bowels, which in easy dentition was even beneficial, is now changed to diarrhoea with distressing tormina and alarming emaciation. The salivary glands, which in easy dentition manifested their implication only by *increased secretion*, now become inflamed and swollen till finally their secretion is altogether arrested, leaving the mouth and tongue dry, parched and painful; and the nervous fretfulness of the normal process is often replaced by actual fever, sometimes attended by the most terrific convulsions.

"We have here sketched hastily some of the more prominent phenomena of both easy and severe dentition, as we each daily observe in practice, and find reported by authors, and we do not adduce them at present as the direct results or consequences of the process, but only as its pretty constant concomitants. In referring to those symptoms hereafter in the course of our essay, we will necessarily enlarge upon and develop more fully some of their characteristics. Let us now, with a little attention, enter into an analysis of these concomitants of dentition, and endeavor to ascertain whether or not their origin may be found in the process itself. To this end, we will consider briefly the *anatomy and physiology* of the parts concerned in this important and often perilous process of evolution."

\* \* \* \* \*

"From the above considerations we are induced to conclude that the *convulsions* are often produced by the irritation of dentition, and can be directly referred to this as the sole cause.

"We arrive now at a point in this somewhat obscure and much disputed question which perhaps affords more ground for doubt than any of the foregoing, viz., a consideration of the *pathogenic influence of dentition in the cholera infantum or diarrhoea* so uniformly co-existent with this process. Unlike the convulsions, the analogy between which and certain known and established phenomena of the excito-motory system, which it is only necessary to refer to, and their operation is plain and intelligible, this new set of symptoms, if we refer them to the process of dentition, requires us to look yet deeper into the mysteries of our nervous organization, and to *venture still one step further on the terra incerta* of sympathetic interpretation.

"In order to apply our arguments, let us hastily review the foregoing investigation, that they may bear more fully upon this part of our question; and, firstly, we have seen that inflammation, pain, and irritation are produced *locally* by the process of dentition, evinced by restlessness, biting, &c. Secondly, we have seen that this local irritation can be transmitted by



excito-motory influence to other and distant parts of the body, manifested by convulsions. We have also endeavored to corroborate this latter opinion by a reference to the order of succession in the nerves in which this irritation occurs, and also by a comparison of these phenomena with other well understood and established analogous phenomena. Heretofore we have had to deal entirely with functions of the cerebro-spinal system of nerves; but to account for this second and more obscure part of our problem, we must look in vain to any direct anatomical connection between the fifth pair and the rest of this system of nerves. *We are forced to seek out other connections, indeed somewhat more intricate and indirect, but fortunately no less legitimate and definable.* We have now to consider a set of organs which, unlike the voluntary muscles, have no connection, or rather, we would say, emphatically, they *have* a connection, though indirectly, with the cerebro-spinal system. We mean the abdominal viscera, which we know are almost altogether supplied from the great sympathetic system of nerves. *Now, in the prosecution of our inquiry it becomes necessary, to the elucidation of the question to trace out the same connection between the fifth pair and the sympathetic or secretory, as we did between the fifth pair and the cerebro-spinal or motory nerves,* and then, should we succeed, we will briefly inquire into the bearing which this connection and its possible results may have upon our question.

"The connections between the fifth pair, the rest of the cerebro-spinal system of nerves and the great sympathetic, are so abundant and universal that it is only necessary to enumerate a few of them to illustrate the fact. Firstly, we have a connection in the ophthalmic or first division, by its nasal branch communicating with the ciliary ganglion; then in the superior maxillary, or second division, are branches of communication with Meckel's ganglion; again, in the sub-maxillary ganglion, with the inferior maxillary or third division. So much for the fifth itself. Then we know that every one of the spinal nerves throughout the entire chord are connected to each sympathetic ganglion of the system, thus establishing communications the most abundant and intimate between these two systems of nerves. We know also that these ganglia distribute numerous branches to all the splanchnic viscera by plexuses which accompany the arterial trunks into the minute structure of these organs.

"Thus connected and distributed, this nerve presides over the important functions of nutrition and secretion, which office so characterizes it as to give it the name of the SECRETORY system. In the physiology of the nervous system, there is no fact better established by anatomy and pathology, as well as by experiments on the lower animals, than this, that the sympathetic nerve, whatever else may be its functions, always forms a necessary element in the nutrient and secretory apparatus of all the splanchnic viscera; and further, that upon its sanity depends the due administration of these two great functions. It is the nerve for the bloodvessels; "and," remark Todd and Bowman, "as secretion is mainly dependent on the normal nutrition of glands, it is reasonable to suppose that that function would be to a certain extent controlled by these nerves." And as early as the year 1782, Pourfour du Petit found that the division of the trunk of the sympathetic, opposite the fourth or fifth cervical vertebra in dogs, was followed very rapidly by great disturbance of the circulation of the eye-ball, producing inflammation, flattening of the cornea, and finally destruction of this organ.

"The experiments of Dupuy upon the horse, wherein he severed this nerve at the superior cervical ganglion, also corroborate this statement; general emaciation here ensued, with an anasarctous condition of the limbs and an eruption over the whole cutaneous surface.

"In some experiments made by Dr. J. Reid, and reported by Todd and Bowman, in reference to the sympathetic branches supplying the eye, it was found that the effect of a section of this nerve was to produce an immediate injection of the conjunctiva. In one case, he observes, the redness of the conjunctiva took place in a few minutes after the section. It has been already stated, continue these great authors, that a section of the branches of the fifth nerve which supply the eye, is followed by ulceration and other signs of impaired nutrition in the eye-ball. But these changes do not take place for some time after the section of the nerve—generally many days elapse—and they are attributable to the presence of irritating particles which, owing to the insensible state of the conjunctiva, are suffered to remain in contact with the surface of the eye, giving rise to inflammation and ulceration of its textures. The effects of section of the sympathetic are *immediate*, and are probably due to a change produced in the blood-vessels, in consequence of the withdrawal of the accustomed nervous influence.

"We have now glanced sufficiently, we think, at the anatomy and physiology of the sympathetic system of nerves, to make the application of such points as are pertinent in the solution of our pathological problem. In its anatomy, we have seen its connections with all three of the divisions of the fifth nerve by ganglia, the connexion of these various ganglia with each other, as well as with the cerebro-spinal axis; and lastly, the distribution of branches from these ganglia, which are conducted by the arteries into every part of every one of the splanchnic viscera. In its physiology, we find it in entire charge of the important functions of nutrition and secretion, and that wherever these processes are effected, it is by the agency of this nerve alone upon the blood-vessels. And further, we have seen that pathology and experiments on lower animals establish its indispensableness to the due performance of these functions, and that whenever the supply of its innervation has been cut off from a particular part of the organism, that part immediately manifests symptoms of *impaired nutrition* and *altered secretion*.

"Now we are all aware that nearly the whole of the intestinal canal, or rather that portion between the stomach and lower part of the colon, receives no direct innervation from the cerebro-spinal axis, but is entirely dependent upon the sympathetic nerve for its supply of nervous influence of whatever kind it may enjoy, whether motory, sensory, or secretory, and consequently an impairment of the function of this nerve must necessarily correspondently alter its condition so far as regards all those functions with which this nerve endows it. The alteration in these functions would, of course, depend, in a great degree, upon the amount of impairment in the source of irritation; thus, as we have seen, if the supply is entirely cut off, the functions of the arteries seem in a great measure to cease, passive congestions occur, and the parts inflame and ulcerate. Now we can also very naturally conceive of a condition of these nerves somewhat analogous to the above, yet intermediate between the entire interruption caused by section, and perfect health—a condition of embarrassed or of exalted innervation. Now this intermediate condition is exactly the state which, from the developments of the foregoing investigation, we feel that we are authorized

to affirm, is that which occurs in severe dentition, and that upon it is dependent the whole train of intestinal morbid phenomena observable during this process.

"That this, so far, is legitimately inferable, we do not think any one will deny. Now let us enquire how far these phenomena are dependent upon dentition; and *analogy* with the *excito-motory* system will much assist us in our argument. We have seen that local irritations can, through this system, produce convulsions by the reflex function of the nerves, the *sensitive branches* of the fifth pair becoming *excitor* to the *motory* spinal nerves; and so, may we justly infer, do these *same branches*, under certain circumstances, become excitor to the *secretory* filaments of the *sympathetic*, distributed so abundantly to the intestinal canal, by transmission of this irritation through the various ganglia with which it is connected. Thus the irritation at first produces simply an exaltation of the innervation of these secretory surfaces, and consequently secretion is more active than normal, producing simple *diarrhœa*. A continuance of the irritation, alters the *character* of the secretion, and we have the various morbid discharges observable during this period. This increase and *change in the secretion are effected by the agency of the altered function of the nerve upon the arteries from which these secretions are eliminated*. Now, when the innervation of these arteries is still further embarrassed by the long continuance of the *reflected irritation*, the state of things nearly approaches that observed in Dupuy's, Reids's and Pourfour du Petit's experiments of actual destruction of the nerve, and we have ulceration of the intestinal mucous membrane; all these phenomena being the result of various degrees of injury sustained by the sympathetic nerve.

"It may here be asked, why should the branches supplying the intestinal mucous membrane become more implicated than any other portion of the sympathetic system?—and why do not similar irritations of the fifth nerve produce like results in the adult? To the first of these questions we answer, that most probably the other portions are implicated, but the manifestations of such implication are greater and graver here than elsewhere, because these are the sole sources of innervation to the viscera. The other organs are in all probability implicated, but receiving a certain amount of innervation from other sources, most of their functions not being entirely secretory, are still, though imperfectly, carried on. But in the intestinal canal the case is far different; the requisitions made upon it are of a nature that it has need for no other innervation than that of the sympathetic system. *Its functions are secretion and nutrition for the whole animal organism*, and when these are impaired, its primary, indeed its *only* intents are altered or completely nullified. The second question is answered by the greater development of this system in the growing than in the adult individual, for the purpose of supplying the more active nutrition and secretion at that time necessary. We know that disease is more apt to occur in many parts of the body during this period; this is the general admission. Thus, according to many authors, among whom are West, Churchill, &c., pneumonia and bronchitis are more apt to attack children during dentition, than at any previous or subsequent period. Cutaneous eruptions, and many other aberrations of secretion occurring during this period, but serve to corroborate our theory of the origin of the morbid intestinal secretion. The increased vermicular action and tormina attending this affection, find a ready explanation in the fact, now well established, that the sympathetic,

receives both motor and sensitive filaments from the anterior and posterior roots of the spinal nerves, endowing the organs of their distribution, to a certain degree, with corresponding susceptibilities.

"In conclusion, let us define the position which, at the end of our investigation, we feel warranted in assuming. They are the following: that in the anatomy and physiology, as well as in the dependent analogies of the process of dentition, we find ample ground for the opinion that the diseases pertaining to this period, *may be dependent, and in many cases are entirely so, upon the local irritation attending the process being transmitted through either the cerebro-spinal system of nerves, producing convulsive diseases in the motory apparatus, or through the sympathetic, causing derangements in the secretory organs, particularly the alimentary canal, by the sway which it exercises over the arterial system, from which these secretions are eliminated.* And the practical deductions to be drawn from these conclusions are,—that we should not be remiss in taking every measure to arrest or lessen this local irritation, either by free and repeated incisions of the gums, or by the judicious administration of appropriate remedies, among which we have found opiates to prove most safe and efficient.

"It would indeed be an improving, and not an unpleasing exercise, to trace out more fully the connexions between the local irritation and the various diseases occurring during the period of dentition, to take more extended views of the abundant analogies and comparisons afforded by this truly prolific subject; but time and the special object of our essay, do not warrant the indulgence in speculations so general and discursive.

"Our object has been to trace the connexion between this process and diseases in general, only in so far as it has a bearing upon the establishment of one principal question in reference to the diarrhœa of this period. The subject has been only glanced at, and deserves a fuller and more extended treatise; wherein all the concomitant diseases of dentition, as *dropsy, eruptions,* and the many infantile neuroses, should be fully and carefully discussed. Such views, we would earnestly invite from some abler and more philosophic member of the profession."

The circumstances of my second published record are the following:—At the fifth annual meeting of the American Medical Association, (1852) held in Richmond, Virginia, not being present myself, I was appointed a special committee, to prepare an essay on the subject of **TYPHOID FEVER**, which essay was read before that body in New York, in May, 1853. In this paper, I took occasion to consider carefully, the ganglionic system, in the support of the position therein assumed, *that all Typhoid Fevers were manifestations of disease through the secretory system of nerves.* While thus engaged, my attention was called to certain experiments performed by Mons. Claude Bernard, of Paris, and made public through the *Gazette Médicale*, and translated in the *New Orleans Medical Register*, together with his deductions therefrom.

On examination, finding that they contained, what at that time, appeared to me, the germ of a theory similar to mine, recorded in June, 1850, though he refers to them as "*a set of phenomena identical with those*"

occurring in the cerebro-spinal system of nerves, denominated *Excito-motory* by Dr. Marshall Hall," while I had deduced this *Excito-secretory* system (in 1850,) saying "*analogy* with, the *Excito-motory* system will much assist us in our argument ;" and further, inasmuch as this distinguished gentleman's report presented itself to my mind at that time, somewhat in the form of an announcement, I deemed it advisable to appeal to our National Medical Congress, in the following brief memoir, *praying permission to record before them*, MY CLAIM TO PRIORITY, and also my protest against the palm of originality attaching to Mons. Claude Bernard.

[ABSTRACT FROM THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION : MEETING HELD IN THE CITY OF NEW YORK, MAY 3RD, 1853.]

Dr. CAMPBELL, of Georgia, submitted a paper, on a question of priority in reference to the discovery of the reflex relation subsisting between the cerebro-spinal and sympathetic system of nerves.—*See Minutes of Sixth Annual Meeting*, vol. vi., page 49.

"*On the Sympathetic Nerve in Reflex Phenomena.* By HENRY F. CAMPBELL, of Georgia.

"In a recent number of the *Gazette Medicale* appear some remarks,\* by M. Cle. Bernard, on the Reflex Actions of the Nervous System. In these, he refers one order of such reflex phenomena to the sympathetic system of nerves, and illustrates, by experiments upon the frog, as well as by reference to many of the acts of nutrition and secretion, that such a relation exists between the cerebro-spinal and ganglionic system of nerves, as well as between the excitor and motory portions of the cerebro-spinal system. Or, in his own words, "two kinds of nerves are requisite for the production of these reflex phenomena of organic life: the first, transmits the impression to the nervous centres; the second, to the viscera. With one order of these nervous filaments is always connected a ganglion of the great sympathetic. Example: the lingual nerve transmits the impression of the taste to the nervous centres; a special nerve then conveys a corresponding excitation to the submaxillary gland; on one of these nerves is situated a ganglion of the sympathetic, the submaxillary ganglion," &c. He gives several illustrations of this fact, and farther, appears to be of the opinion that this set of phenomena are *identical* with those occurring in the cerebro-spinal system of nerves denominated *excito-motory*, by Dr. Marshall Hall; but with this latter part of his paper we have nothing to do. It is only with that portion in which he appears to claim as his own, the suggestion of the theory that there does exist such a reflex relation between the sympathetic and the cerebro-spinal systems, and his presentation of it as an observation entirely new.

"Now, we are not aware of the exact length of time that these views have been held by physiologists; they may be old, or, on the other hand, they may be of recent suggestion; but certainly, we cannot award to M. Bernard the merit of being the first to express such views in relation to the function of the sympathetic system of nerves; and while we are exceeding-

\* Translated by the New Orleans Medical Register.

ly reluctant to refer to our own humble labors in connection with the brilliant discoveries of this most philosophic and able observer, a sense of duty to ourself, as a member of this National Association, prompts us not to allow this assertion to pass unchallenged.

"A reference to a paper presented by us to the Medical Society of Augusta, Georgia, and published in the *Southern Medical and Surgical Journal*, on the Influence of Dentition in producing Disease, will show that this subject was fully discussed by us as early as June, 1850, and that the whole argument upon which our theory of the mode in which dentition does produce certain morbid results (diarrhoea, for instance) is based upon the supposed existence of such a reflex relation between the cerebro-spinal and ganglionic systems of nerves, as will be seen by the following: After referring the occurrence of *convulsions*, during dentition, to the reflex relations existing between certain nerves of the cerebro-spinal system, viz., the fifth pair as excitor, and the muscular branches of the spinal system as motory, we then endeavor to account for the occurrence of *diarrhoea* by establishing the existence of a similar relation between the cerebro-spinal and branches of the ganglionic system supplying the intestinal canal; which suggestions will be found embodied in the following extract from our essay in the June number of the *Southern Medical and Surgical Journal*, volume for 1850, p. 329: 'We have now glanced sufficiently, we think, at the anatomy and physiology of the sympathetic system of nerves, to make the application of such points as are pertinent, in the solution of our pathological problem. In its anatomy, we have seen its connections with all three of the divisions of the fifth nerve by ganglia, the connection of these various ganglia with each other, as well as with the cerebro-spinal axis, and lastly, the distribution of branches from these ganglia, which are conducted by the arteries into every part of every one of the splanchnic viscera. In its physiology, we find it in entire charge of the important functions of nutrition and secretion, and that wherever these processes are effected, it is by the agency of this nerve alone upon the bloodvessels. And farther, we have seen that pathology, and experiments upon the lower animals, establish its indispensableness to the due performance of these functions, and that whenever the supply of its innervation has been cut off from any particular part of the organism, that part immediately manifests symptoms of impaired nutrition and altered secretion.

"Now, we are all aware that nearly the whole of the intestinal canal, or rather that portion between the stomach and lower part of the colon, receives no direct innervation from the cerebro-spinal axis, but is entirely dependent upon the sympathetic nerve for its supply of nervous influence, of whatever kind it may enjoy, whether motory, sensory, or secretory, and consequently an impairment in the function of this nerve must, necessarily, correspondently, alter its condition, so far as regards all those functions with which this nerve endows it. The alteration in these functions would, of course, depend in a great degree upon the amount of impairment in the source of irritation; thus, as we have seen, if the supply be entirely cut off, the functions of the arteries seem in a great measure to cease, passive congestions occur, and the parts inflame and ulcerate. Now, we can also very naturally conceive of a condition of these nerves somewhat analogous to the above, yet intermediate between the entire interruption caused by section and perfect health; a condition of embarrassed, or perhaps of exalted innervation. Now, this intermediate condition is exactly the state which,

from the developments of the foregoing investigation, we feel that we are authorized to affirm is that which occurs as the result of severe dentition, and that upon it is dependent the whole train of intestinal morbid phenomena observable during this process.

“That this so far is legitimately inferable, we do not think any one will deny. Now let us inquire how far these phenomena are dependent upon dentition; and analogy with the *excito-motory* system will much assist us in our argument. We have seen that local irritations can, through this system, produce convulsions by the reflex function of the nerves, the sensitive branches of the fifth pair becoming *excitor* to the *motory* spinal nerves; and so, we may justly infer, do these same branches (of the fifth pair), under certain circumstances, become *excitor* to the *secretory* filaments of the *sympathetic*, distributed so abundantly to the *intestinal canal*, by a transmission of this irritation through the various ganglia with which it is connected. Thus, the irritation at first produces simply an *exaltation* of the *innervation* of these *secretory* surfaces, and consequently *secretion* is more active than normal, producing simple *diarrhœa*. A continuance of the irritation alters the character of the secretion, and we have the various morbid discharges observable during this period. This increase and change in the secretion are effected by the agency of the altered function of the nerve upon the arteries from which these secretions are eliminated. Now, when the innervation of these arteries is still farther embarrassed by the long continuance of the reflected irritation, the state of things nearly approaches what was observed in Dupuy's, Reid's, and Pourfour du Petit's experiments, of actual destruction of the nerve, and we have ulceration of the intestinal mucous membrane; all these phenomena being the result of various degrees of injury sustained by the sympathetic nerve. It may here be asked, Why should the branches supplying the intestinal mucous membrane become more implicated than any other portion of the sympathetic system? And why do not similar irritations of the *fifth nerve* produce like results in the adult? To the first of these questions we answer, that most probably the other portions are implicated; but the manifestations of such implication are greater and graver here than elsewhere, because these sympathetic branches are the sole sources of innervation to the viscera. Other organs are in all probability affected; but, receiving a certain amount of innervation from other sources, most of their functions not being entirely secretory, are still, though imperfectly, carried on. But in the intestinal canal the case is far different; the requisitions made upon it are of such a nature that it has need for no other innervation than that of the sympathetic system. Its functions are secretion and nutrition for the whole animal organism; and when these are impaired, its primary, indeed its only intents are altered, or completely nullified. The second question is answered by the greater development of this system in the growing, than in the adult individual, for the purpose of supplying the more active nutrition and secretion, at that time, necessary. We know that disease is more apt to occur in many parts of the body during this period than at other times; this is the general admission. Thus, according to many authors, among whom are West, Churchill, &c., pneumonia and bronchitis are more apt to attack children during dentition than at any previous or subsequent period. Cutaneous eruptions, and many other aberrations of secretion occurring during this period, serve to corroborate our theory of the origin of the morbid intestinal secretion. The increased vermicular action and tormina attending

this affection find a ready explanation in the fact, now well established, that the sympathetic receives both motor and sensitive filaments from the anterior and posterior roots of the spinal nerves, endowing the organs of their distribution, to a certain degree, with corresponding susceptibilities.

“In conclusion, let us define the position which, at the end of our investigation, we feel warranted in assuming. It is the following: That in the anatomy and physiology, as well as in the dependent analogies of the process of dentition, we find ample ground for the opinion that the diseases pertaining to this period may be dependent, and in many instances, are entirely so, UPON THE LOCAL IRRITATION ATTENDING THE PROCESS, BEING TRANSMITTED THROUGH the cerebro-spinal system of nerves, producing convulsive diseases in the motory apparatus, OR THROUGH THE SYMPATHETIC, CAUSING DERANGEMENTS OF THE SECRETORY ORGANS, PARTICULARLY OF THE ALIMENTARY CANAL, by the sway which it exercises over the arterial system from which these secretions are eliminated.”

“In the above brief quotation, it will be observed that the doctrine of the reflex function between the cerebro-spinal and sympathetic systems is plainly enunciated, and not only is the physiological fact noted, but we there also have surmised the transmission of permanent irritation, or of paralysis from the cerebro-spinal to the sympathetic system, giving rise to various aberrations in nutrition and secretion. *This opinion we have held for several years, teaching to our classes that there existed BETWEEN THE CEREBRO-SPINAL and the GANGLIONIC system of nerves, a relation similar to that between the sensitive and motor branches of the cerebro-spinal, and which Marshall Hall terms EXCITO-MOTORY; WHILE WE HAVE TERMED THAT BETWEEN THE CEREBRO-SPINAL AND SYMPATHETIC systems EXCITO-SECRETORY.*

“As we have before indicated in this report, we do not feel authorized to lay full claim to the above theory without farther investigation of the subject; but with all due courtesy to that highly distinguished gentleman, we can say that we feel assured that these views are not original with M. Bernard, unless he entertained them previous to June, 1850. There may have been other similar observations; but until the publication of M. Bernard's, we had not noticed them elsewhere than in our paper on Dentition.”

You will perceive that in the above memoir, I have introduced enough from the first record to constitute a pretty complete *resumé* of my original announcement and process of induction. But being apprehensive that the doctrine of a *new function* so clearly and publicly defined, would suggest its appropriate NAME to some one, before I was prepared to take up the subject again, I, on this occasion, condensed into a short paragraph, as you will see, near the end of the paper, a *comprehensive RE-STATEMENT of my doctrine*, and placing it in juxta-position with your own distinguished name, and also, in contra-distinction to your own great, *analogous* discovery of the *Excito-motory* system, after *emphasizing* the word “similar,” to indicate that I did not consider them “*identical*,” I applied to it, the expressive designation (now used by yourself,) of *EXCITO-SECRETORY—a word, never before that moment, (as I believe and have above stated,) written by any other person in any language, except by me, in my private notes.*

As an evidence of the importance attached to this brief communication



by the publishing committee of the association, I call your attention to the fact that it is rendered conspicuous by not less than *four* references in the short index at the end of this volume of the Transactions. On the appearance of the volume, (vol. vi., 1853) several of the prominent scientific periodicals made special reference to my claim of priority preferred against Mons. Cle. Bernard, during their review of the Transactions. I send you two of these, the most prominent, perhaps, now at hand :

From American Journal of Medical Sciences, January, 1854. No. LIII, new series, p. 135. Edited by Isaac Hays, M.D., Philadelphia, Pa.

"The next article is a short paper by Dr. Henry F. Campbell, of Georgia, in which that gentleman lays claim to priority in the enunciation of the doctrine that there exists a reflex relationship between the sympathetic and the cerebro-spinal systems of nerves, which has been recently claimed by Dr. Bernard, of Paris, as an observation entirely new and original with him. Dr. Campbell has shown that, at least, priority of publication is with him."

The next is from the New York Journal of Medicine, new series, Vol. XII., No. 2, March, 1854. Edited by S. S. Purple, M.D., and Stephen Smith, M.D. Page 254.

"*On the Sympathetic Nerve in Reflex Phenomena*, by HENRY F. CAMPBELL, M.D., of Ga.—The design of this short article is to establish the precedence of the writer's enunciation of the doctrine of a reflex relation existing between the cerebro-spinal and ganglionic system of nerves, recently put forth by M. Bernard. The views of Dr. Campbell are contained in a paper on the Influence of Dentition in Producing Disease, published in the *Southern Medical and Surgical Journal*, in 1850. The author certainly establishes his claim to priority of publication, as far as regards Bernard's article referred to in the *Gazette Médicale*; but, if we are not mistaken, similar views have been advanced at a still earlier date. As he does not, however, pretend to priority over all others, but only so far as his information extends, we will not be to the trouble of examining the subject farther."

You will here perceive that the above claim of *Priority* over Mons. Claude Bernard, in 1854, is distinctly referred to, and recognized, by two of the leading medical periodicals of this country, both of which have exchanges in Europe, and the first especially circulating and being read, in your country, more, probably, than any other American medical journal.

On the printing of the sixth volume of the Transactions of the American Medical Association, for 1853, I engaged with the publishers to strike off extra copies, for distribution, of the "*Report on Typhoid Fever*," in which memoir, the principle of the Reflex Phenomena between the cerebro-spinal and ganglionic or secretory system of nerves is recognized, though not made a prominent feature of the essay. The pamphlet made up from these extra sheets was sent to yourself, as well as to your distinguished cotemporaries,

Drs. W. B. Carpenter, R. B. Todd, Mr. W. Bowman, and Dr. W. Jenner; and more recently, to Dr. T. B. Peacock, of St. Thomas's Hospital.

Near the close of last year, I was solicited to become senior editor of the *Southern Medical and Surgical Journal*, and with this subject ever uppermost in my thoughts you will observe, that my first editorial work consisted in certain strictures upon a lecture on "The Effects of Denfition, in Nursing Children," delivered at Hotel Dieu, by Mons. Trousseau, of Paris, wherein I enter into a *re-statement* of my views published in June, 1850, again bringing the *two great facts of the nervous system* into emphatic contra-distinction and analogy, the *Excito-motory* being indicated by the "*convulsive Phenomena*," while the *Excito-secretory* is instanced, by the "*diarrhœa*" succeeding the local irritation in the sensitive branches of the fifth pair. From this I quote the following:

"Here, it will be observed that we have unmistakable evidences of local irritation of the gums, which we know are supplied by branches of that most exquisitely sensitive of all sensitive nerves, the fifth pair; if we admit the principle of reflex action, we must recognize here a competent cause, considering the impressible character of the infant's nervous system, for the *convulsive phenomena*. On the other hand, we may trace a connection between the local irritation and the *diarrhœa* succeeding it, in an *analogous* manner, taking into view the intimate connections between the fifth pair and the nerves of the ganglionic nervous system, from which the intestinal mucous surfaces receive their *secretory* endowments.

"We have been thus careful (I here continue,) in pointing out the manner in which we think this *local irritation* may *produce* the convulsive symptoms and, also, even the *increased secretion from the mucous surface of the bowels* and the *diarrhœa*, in order to give it what we consider its proper amount of importance, and to direct attention to this, as the chief source of those difficulties, calling for early and continued care."\*

This is my latest printed record, published in this country, as you will perceive, *three months previously to your first*; but this important and extensive subject has never ceased to possess and stir my thoughts—suggested to my mind in the first instance, by an accidental and trivial circumstance, occurring years ago, in the earliest days of my pupilage, it became inwoven with the tissue of my thoughts, first, as an unpromising and tantalizing problem, it is true, but soon, as a broken seal—a revealed fact; and finally, as the familiar, *self-evident truth* of reflex nervous action.

And now, dear sir, I have completed the chain of evidence which I find in my published records upon this, to me, momentous subject. While it has been acknowledged on all hands, that there is an *unity* in the truths of *nature*, it is a pleasing reflection that there is also an *universality* in the principles of *science*—nature's humble interpreter—which makes them the property of no one clime, or particular race of men, but parts of that vast

\* *Southern Medical and Surgical Journal*, Vol. XIII, pp. 20 and 21.

and common treasury, for the benefit of all mankind. To this rapidly accumulating store, your own genius and unremitting energy have contributed more, much more, than often falls to the lot of one member, of this great commonwealth, to gather. Your name must ever be associated with the history of doctrines in the physiology of the nervous system, acknowledged and made the basis of induction in every portion of the scientific world.—Observing you, admiring you, and studying you closely, can you censure me, if I have wished, in some degree, to *emulate* you, and place my humble name one day, near your own, on the scroll of science. That day is now, I hope, about to arrive; you have intimated that this *Excito-secretory* function of the nervous system, which, as I think, I have herein shown has been developed and named by me in 1850 and 1853, is a principle not less extensive than the *excito-motory* function developed and named by you in 1837. You have said, most truly, that it is “a vast subject requiring many laborers and many years, fully to develop that and the other sub-system.” I here ask permission to express the wish, that as long and as usefully as you have already lived, you may still be spared, to add much to the *fuller* development of the *Excito-secretory* system, much more than I could ever hope alone to accomplish.

Mingled with other feelings, all of which are at this moment those of sincere kindness, is the regret, that my repeated publications on this subject have never reached your eye. I feel that I am not chargeable with having omitted to give publicity to my records, as the annals of the American Medical Association will plainly reveal. As you intend publishing shortly more in detail upon these subjects, I here earnestly and respectfully ask the honor of having my records meet due acknowledgment at your distinguished hands.

And now, respected sir, I will close this already too prolonged communication: as courtesy to you, and justice to myself, were professedly the instigating causes of its inditement, I do most sincerely hope, that in the too earnest establishment of the latter, I have not at any moment even *appeared to have forgotten* the former.

I am, Sir, with feelings of great respect,

Your obedient servant,

HENRY F. CAMPBELL.

*NOTE*.—We have not hesitated to occupy so much of our space with the above letter, as we feel assured that our *readers* will take sufficient interest in our *American Claim for Priority*, to excuse such appropriation. The subject is of too deep an interest to us, to allow the merit of the discovery to pass from our grasp, and we lay this claim before our *confreres* in the confident hope, that it will be generously sustained by them now, as it was in 1853, before the American Medical Association.

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## ORIGINAL AND ECLECTIC.

### ARTICLE XV.

*Remarks on the Nature and Treatment of Pneumonia.* By R. B. GARDNER, M. D., of Barnesville, Georgia.

As Pneumonia is an important disease, and seems to occupy but little space in your valuable Journal, I will, with your indulgence, offer a few suggestions in regard to its progress and treatment, more particularly as it occurs in the adult, for the *consideration*, if not the *benefit*, of your readers. While I feel no disposition whatever to arrogate to myself any claim to originality in the opinions I may advance, yet if, by disseminating more widely what is already known to some of our profession, I succeed in strengthening the hands of a younger brother, or enlightening the mind of some tyro in medicine, I shall feel that I have accomplished my task, and will feel some degree of remunerative consolation for the effort made.

Without reference to the prescribed classification of authors, Pneumonia, as met with in Georgia, will very generally be found under one of the following forms—viz: Acute, Secondary, or Typhoid. It is not proposed to give any account of the latter form in the following article, since it occurs usually as an epidemic, and is liable to be very much modified by the influences operating in its development and affecting, in varying degrees, its subsequent progress.

Acute Pneumonia is commonly so fully formed and clearly manifest as to render minute description entirely unnecessary. The medical novice seldom fails to recognize its presence; and its ordinary symptoms are often so apparent to the eye as to enable non-professional persons in charge of families and having occasional observation of disease, to diagnose its existence with great accuracy. The pain in the side; the difficult, hurried, and, sometimes, laborious breathing; the cough often suppressed or muffled, and the high fever, at once direct the attention to the condition of the pulmonary organs. If any doubt arises in the mind of the physician as to the real nature of the disease with which he is called to contend, he has but to call into requisition the aid of acoustics, and explore the entire cavity of the chest. By the assistance of physical diagnosis he may ascertain with considerable precision the healthy or diseased condition of the several organs located within the cavity of the thorax; and by combining this species of knowledge with that derived from a study of the general symptoms, he may arrive at a conclusion so clear and convincing as to suffer no fear of mistaken diagnosis to lead his wary mind into error in regard to the course of therapeutics best suited to the case under investigation. .

Early in the attack, usually within the first day or two, when the patient is in, what writers denominate, the first stage, or that of congestion, auscultation will reveal a slight alteration from health in the respiratory sounds emanating from the diseased lung. This, in the books, is generally termed "rude respiration," in consequence of the imperfection of sounds given off by the distressed organ, they being, as yet, in an undeveloped and transition state. The breathing is harsh and varying, and the crepitant rhonchus may be discerned by a well educated ear applied either mediately or immediately over that portion of the exterior of the thorax corresponding with the inflamed pulmonary parenchyma beneath. This rhonchus, wherever distinctly ascertained to exist, is justly regarded as characteristic of the first stage of Pneumonia. But to the general practitioner, it does not possess so much importance as other physical signs with which it is associated in the second stage, in which the patient is more frequently found when he is first called upon to visit him.

In the second stage, or that of hepatization, in addition to the foregoing rhonchus heard more or less distinctly over different

portions of the affected side, bronchial respiration and bronchophony may likewise be easily distinguished. At this period of the attack, also, which supervenes in the course of the second, third, or fourth day, percussion, previously hollow and resonant, now becomes dull, and often more or less flat, in consequence of the consolidation of the vesicular structure and the partial or complete closure and obliteration of the minute ramifications of the bronchial tubes. Most deaths occasioned by *Pneumonia* occur in this stage.

The third stage, or that of suppuration, beyond a very limited extent, is not often encountered in country practice, and for that reason need not detain us here.

Another stage of acute *Pneumonia*, the typhoid, might, by way of supplement, be added to the three foregoing. It is characterized, as far as I have seen it, by a general diminution and decay of the vital powers, while the local phlogosis continues to perpetrate its ravages. In the course of an ordinary attack, somewhat protracted, the patient grows dull and listless, complains but little of pain in any part of the system, and seems almost wholly indifferent to his personal safety. The pulse grows feeble and increases in frequency; the extremities become more or less cold; the cough abates much of its severity; alarming prostration ensues in the course of a few days; and death speedily closes the scene, unless by great vigilance, skill and energy, the medical attendant succeeds in warding off the catastrophe.

Secondary *Pneumonia* is not materially different from the ordinary acute variety, except in the circumstances of its origin and the extreme uncertainty of its duration and result. All are aware that the changes of weather, cold, and exposure at certain favorable seasons of the year, are liable to produce a variety of inflammatory affections of the pulmonary, more than of other organs. Secondary *Pneumonia* is that form produced in the usual way, but following close upon the heels of some other disease—frequently measles—which has already enfeebled the system and engrafted upon the organism a strong proclivity to pulmonary disorder.—Hence the extreme danger often attending such cases.

The symptoms of this variety differ very immaterially from those belonging to the acute form, except in being generally more severe and more frequently alarmingly perilous, with, at the same time, a greater tendency to assume the typhoid form, and that too at a somewhat earlier period of its progress.

The reader will perceive from the foregoing sketch, that I have not entered into minute detail, or systematic arrangement, in the account given of the disease under consideration. My object in this communication is to be brief, and at the same time practical, as I shall devote more attention to the subject of Treatment.

In regard to the Prognosis, which may be studied with more benefit in the books, I would only remark, that ordinary uncomplicated attacks involve but little danger; while in severer cases, attended with great difficulty and rapidity of breathing, and a pulse running much above 120 beats in the minute, the peril is extreme, and the vigilance and skill of the physician severely taxed. In secondary attacks also, seizing upon susceptible and already debilitated frames, the prognosis is generally doubtful and often gives gloomy premonitions, too plain to be misunderstood, of the most fearful result.

The treatment of Pneumonia most successful in my hands, and not stereotyped by authors, is quite simple, but founded, I think, upon the best established rules of medical philosophy. We have to deal with a disease which is essentially a phlogosis. The parenchyma of the lung is highly inflamed; an organ indispensable to the proper discharge of the functions of health is involved in serious disorder; the constitution sympathizes—the heart first sounding the alarm, which is then echoed along the whole vascular circulatory system. The sound lung, or portions of lung, have now imposed upon them the performance of a double duty, in arterializing the largely increased currents of the circulating fluid. The velocity with which the oxygenated blood courses along the various channels of the body to disgorge itself into the cavity of the heart, again to be hurried on to the pulmonary vesicular structure, stimulates the great central organ to a still higher pitch of excitement, the life-sustaining fluid in consequence being driven with still greater impulse into the inflamed lung, increasing the difficulties under which it already labors, and to the same extent lessening the probabilities of recovery. Under these urgent circumstances, what are the indications to be met by the enlightened physician in the conscientious discharge of professional duty? By the operations of the disease, fuel is constantly added to the spreading flame. The important and responsible duty devolving upon him here is too evident to be mistaken. He must invoke to his aid the resources of a well disciplined mind, and by the help

of the best system of therapeutics known to the profession, give his patient the greatest chances of recovery in his power. He who dallies here (I try to speak respectfully), is a professional fool. The life of a human being, perchance, depends upon decisive and energetic action. The practitioner may, if he chooses, administer an emetic. This will often be necessary, for the purpose of clearing the stomach of any acrid secretions or offensive ingesta, and will be of service so far as it goes. If, however, the patient has previously enjoyed good health, and his attack be recent, and marked by symptoms of severity, by all means, *bleed him at once*. If his pulse be feeble, and doubt be entertained of the propriety of venesection, the lancet should be tried experimentally; should it not only be borne well, but the pulse grow fuller and less frequent under the operation, there is every encouragement to push it well nigh to the extent of producing syncope, always taking the blood, when possible, from the patient in a sitting posture. From 12 to 20 ounces may be safely abstracted at any time within the fourth or fifth day. And the operation should be repeated, if found necessary, during that period, taking reduced quantities, of course, at each subsequent repetition. This done, a far better course for the patient may be adopted than the long since hackneyed custom of keeping him on the periodical exhibition of some nauseating drug or compound, until his stomach is driven into rebellious disorder, and the attendant compelled to desist, at the peril of superadding to the original disease a modified form of gastro-enteritis, much to the embarrassment of his case and to the detriment of his professional reputation. All praise to Dr. Norwood, of Cokesbury, S. C., for the invaluable boon conferred upon Southern Medicine, by the publication of his experiments with, and remedial applications of, the *Veratrum Viride*, or American Hellebore. The tincture, prepared according to his formula, and properly administered, is, in some cases, a complete substitute for the lancet, while in others, it displays the full powers of a most efficient adjuvant. The stormy excitement of the heart and arteries is speedily calmed, as if under the influence of some magical spell, and all their former furor seems at once forgotten. The oppressed breathing soon becomes gentle, easy and natural; and the drought hitherto prevailing throughout the vesicular structure and smaller ramifications of the bronchial tubes is quickly followed by a copious expectoration, which gradually relieves the lung of the inflamma-



tory product, and restores its healthy organization. This remedy, urged to the proper extent, where the patient is seen in time, and before the inflammation has advanced too far to terminate in resolution, may be relied upon, when judiciously administered, as a specific in the treatment of Pneumonia. In many cases, I am in the habit of trusting to its virtues alone; in others, to a compound of which it is the leading and by far the more powerful ingredient. In from six to twelve, and sometimes not earlier than from eighteen to twenty-four hours, the action of the heart is almost uniformly brought fully under its control, the pulse subsiding from 120, 130, 140, 150, and sometimes a 160 beats in the minute in the adult, to 60, 70, 80, or 90. The breathing, to which I have already referred, now becomes gentler, easier, and greatly reduced in frequency, and the general symptoms altogether more agreeable and favorable. If the low standard of the pulse be maintained by continuing the use of the veratrum, the patient will rapidly improve, the cough become loose and painless, and free expectoration set in, quickly followed by all the evidences of commencing convalescence.

The dose and manner of giving this remedy, which seems to combine such valuable properties in so great perfection, should vary with the age, condition, and peculiarities of each individual. From one to two drops may be given to a child from 3 to 10 years of age, every three hours; from three to four drops to a youth from 12 to 16 years old; and from five to eight drops to the adult. It should be diluted with water, or given combined with some anodyne diaphoretic mixture, if the amount of pain and degree of fever render it necessary; and as a general rule, the dose should be repeated every three hours, unless when contra-indicated by the supervention of much and distressing nausea, or its specific effect is produced to a sufficient extent. In the event of nausea, it may be discontinued, as the remedy is equally potent without its production, until some aromatic or grateful cordial is administered, and a quietus put to the complaints of the stomach, when it should be resumed and steadily persevered in, if found to agree better with this important organ. I have generally found a little strong ginger tea to answer this purpose admirably well, and its efficiency may sometimes be increased by the addition of a very slight portion—say from a half to one drachm—of brandy; the tea to be repeated if necessary. Should the stomach still prove

refractory and continue to reject the veratrum, a sinapism, or even blister, should be applied to the epigastrium and the unruly organ coerced into submission. Where the specific effect of the Hellebore is produced upon the circulation, its use may be continued at lengthened intervals, or entirely suspended for a time, to be resumed again when required by the necessities of any individual case: indeed, it should be given very much according to circumstances, and may be repeated much oftener than every three hours in cases of great urgency. Should too much depression follow its use, stimulants will promptly restore the circulation and obviate any threatened evil from that quarter.

The efficacy of Cathartics should not be overlooked in the treatment of this disease. Their value depends mainly on the depletion they effect. They are highly useful adjuvants to the lancet, and when its employment is of doubtful propriety, they, to some extent, fill its place by draining off the watery constituents of the blood, and in this way relieving, in some measure, any existing plethora, and to the same degree moderating the violence of the inflammation. As a general rule, the saline are preferable, in consequence of the aqueous discharges they produce, and likewise their refrigerating and diaphoretic tendency. They should be administered chiefly during the early periods of the disease, and to the extent of producing one, two, or three free evacuations every twenty-four hours, as the grade of inflammation and amount of plethora present may seem to demand.

In some protracted and obstinate attacks of *Pneumonia*, it will often be profitable to try the effect of a cautious mercurial course. An occasional dose of calomel, or some other preparation of mercury, may be safely and sometimes advantageously administered in all cases of recent invasion. But when the disease continues to advance, having successfully resisted the antidotal powers of all other well selected remedies, then a slight ptyalism, carefully produced, will sometimes penetrate to its utmost ramifications, and dislodge it entirely from the system. The antiphlogistic powers of this remedy are too well known to require notice here; yet, where it can be dispensed with, its employment in prolonged courses cannot be regarded as being otherwise than highly injudicious.

Expectorants that are direct in their tendency are serviceable only in the latter stages of inflammation of the lungs, when all

inflammatory excitement has nearly subsided, and the weakened organ needs a stimulant to enable it to expel the humid secretions discharged into the air vesicles and bronchial tubes. I have not, however, had occasion to attach much importance to their use in the treatment of the disease under consideration. The veratrum, given for another purpose during the acute stages, when successful in controlling the circulation, I have found likewise highly effective in promoting the secretion and discharge of the mucus and phlegm, calling for the exhibition of an expectorant; so much so, in fact, as to render any other remedy of this class entirely unnecessary.

Blisters are highly important remedies in their influence upon the course and progress of this disease; and from my own experience and observation, I think it, to a great extent, an erroneous notion, entertained by many pathologists, that their application early in the attack excites the pulmonary inflammation, instead of deriving therefrom. Under the well established principle of pathology that *ubi irritatio ibi fluxus*, the external irritant uniformly acts as a powerful revulsive, diverting the circulating currents from the inflamed organ beneath, to the inflammation artificially excited on the surface of the thorax. The vascular connection between the lungs and the exterior of the chest, is by no means so intimate as to render it an inevitable consequence that the afflux of blood, invited by the external irritant, will necessarily propagate its exciting and engorging influences to the inflamed structures within, even at the onset of an attack of pneumonitis. The opposite of this I believe to be generally true, and have accordingly been so governed in practice, without having any occasion to regret the course pursued. The truth of experiment is higher in its nature, and should always be ranked higher, than that of theory, however beautiful its teachings or logical its deductions. Blisters, when venesection has not, as well as when it has been practiced, co-operate harmoniously in their effects with the sovereign remedy, so often a specific, of which I have already spoken—the *Veratrum Viride*. They possess one advantage also over all other remedial agents in the disease of which we have been treating—viz: their applicability at all stages and in every condition, whether during the furor of the onset, the abating severity of the decline, or the alarming prostration sometimes ensuing when typhoid symptoms become fully developed. They are highly useful

as revellants applied to the surface of the chest in conditions of aggravated inflammatory excitement; and as excitants, applied to the extremities and over various portions of the trunk, when the vital energies are fast failing and death is well-nigh ready to claim its victim.

When the Typhoid stage arrives, it should be treated upon general principles, without much regard to the pulmonary affection. It is in this stage, when at all obstinate or protracted, that much benefit may sometimes be derived from mercury. Should its progress be marked by much prostration, stimulants become indispensable. The sinking energies must be supported by external as well as internal agents; by the application of artificial heat, and by rubefacients and blisters over a large amount of surface when necessary, and repeated in quick succession; and by the prompt and bountiful administration of wine, brandy, and even sulphuric ether, when others fail. This course, energetically pursued and persevered in as long as the patient continues to breathe, will often induce his languishing powers to rally, and ultimately restore him to his grateful family and delighted friends, when to all human appearances the last ray of hope was obscured behind the lengthening shadows of death, and the discomfited physician could see nothing but winding-sheets and burial cases, the reward of his toil and skill, as the objects of his professional care are in all probability soon to be borne away to the silence of the tomb.

The Treatment of Secondary Pneumonia should be conducted upon the same principles as that of the primary or acute variety; the attendant always remembering that, in consequence of having been preceded by other disease, it will not often bear bleeding so well, and in all probability before its close will require a greater amount of stimulation, being more subject to assume the typhoid character.

In conclusion, I will add, that my success with the foregoing practice has been highly flattering, very much surpassing that derived from the course usually commended by authors. It is for this reason I submit these views to the consideration of my generous professional brethren.

## ARTICLE XVI.

*Vesico-Vaginal Fistula.*—A Report read before the Medical Society of the State of Georgia, at their Annual Meeting, at Augusta, April 8th, 1857. By P. M. KOLLOCK, M. D., Professor of Obstetrics and Diseases of Women and Children, in the Savannah Medical College.

In order to secure completeness and systematic arrangement, in the Report which I now present to the Society, on the subject which was assigned to me at its last annual meeting in Macon, it will be necessary for me to go over ground which has been before trodden by other Reporters, and to recapitulate historical facts and statements, which are familiar to many of my hearers, and which, to them, may be wanting in that degree of novelty and freedom from triteness, which are requisite to secure a patient and willing attention.

The immense importance of the subject, however—the difficulties by which it has been hitherto surrounded, and the very meagre manner in which it has been treated of in text-books, will, I feel assured, be received as a sufficient excuse for this unavoidable repetition.

Whenever an abnormal communication is established by disease or accident, between the urinary and genital organs of a female, so that the renal secretion, after arriving in its vesical receptacle, instead of being expelled at will through its natural canal, the urethra, passes directly and involuntarily, into the vagina or uterus—it is called a fistula, the character of which will vary, as regards its curability and the inconvenience and suffering which it induces, according to the point at which the unnatural route occurs. And in order to distinguish these several varieties of the affection, titles have been conferred upon them derived from their locality: hence we have the *urethro-vaginal*, *Vesico-vaginal*, and *Vesico-uterine* varieties, according as the communication is between the urethra and vagina, the bladder and vagina, and the bladder and uterus. In the first, the perforation occurs in the mucofibrous septum, which separates the canal of the urethra from that of the vagina; in the second, it occurs at the point where the "bas fond," or lower fundus of the bladder rests upon the front

wall of the vagina; in the third, the rent occurs at the point of contact of the vesical fundus, with the anterior part of the cervix uteri.

The gravity of the affection is increased according to the distance of the fistulous opening from the external orifice of the urethra. There is no disease, concerning which we learn less from the writings of ancient authors than the one which we are now considering. There is no reason to doubt that it did sometimes occur, even in the most primitive stages of human existence, for one of the chief causes of it (difficult parturition) had its origin in the primæval cause—and even the brute creation are not wholly exempt from it.

Notwithstanding the sad and disgusting picture which is presented by the victims of this fearful malady, it attracted little or no attention from surgeons until the commencement of the present century, and the most recent surgical works alone contain any thing like an intelligible account of it.

We cannot restrain our astonishment at this circumstance, when we contemplate the misery and ruin which is wrought in the existence of that portion of the human family, which Shakspeare styles "the cunningest pattern of excelling nature"—which, when robed in charms dependant upon a healthy performance of all the animal functions, challenges the admiration of the most insensible, and warms into adoration and love the icy soul of the Stoic.

The causes which usually operate to the production of a condition so deplorable, are such as are connected with the performance of a function, than which, there is none more important, none more necessary to the existence and continuance of animal life: the function of procreation. Nature—all powerful as she is—sometimes fails in the performance of this, her grandest work; and Art, is either summoned too late to her assistance, or proves itself utterly incompetent.

Whenever, during a protracted or difficult parturition, the presenting part of the child (generally the cephalic extremity) is forced down into the pelvic excavation, and there becomes arrested and impacted from any cause, the soft parts of the mother receive a severe nip between the child's head and the osseous circle by which they are enclosed, as if they were placed between the jaws of a vice.

When this severe pressure is allowed to continue for many

hours, occasioned by strong uterine contraction acting on the child's pelvic extremity, and a continuance of the obstruction to the advance of the cephalic extremity, the most prominent point of the vaginal surface, which is generally in front, behind the symphysis pubis, and where the urethra passes out under the pelvic arch, has to bear the brunt of the greatest amount of the acting force; the circulation is arrested at that point; a slough ensues and a loss of a portion of the soft maternal tissue; which results in the production of a fistulous opening, through which urine flows into the vagina, either directly, or, if the slough occurs at a sufficient distance from the external orifice, the urine passes first into the uterine cavity, and then into the vagina.

Although this is the usual manner in which these fistulæ are produced, there are other causes equally competent, and which play an important part in their creation.

Among these, are clumsy manipulations with instruments, in the hands of unskilful operators, for the purpose of effecting delivery; the introduction of the blades of the forceps into the maternal organs with undue force—slipping of the same instrument during traction—slipping of the perforating scissors, or unguarded crotch-et—sharp spiculæ or fragments of the foetal cranial bones, carelessly extracted, may lacerate and tear the soft parts of the mother, so as to terminate in the formation of urinary fistulæ. The long continuance of a foul pessary in the vagina, has been known to produce ulceration and perforation of the vesico-vaginal septum; as well as ulcerations of a specific character, both syphilitic and cancerous. Colombat states, that an example is cited by Fabricius Hildanus where the fistula was caused by the long retention of a calculus in the bladder. By whichever of the causes which have been detailed, the malady under consideration is originated, it is soon manifested, by a group of symptoms sufficiently characteristic to render the diagnosis both easy and certain.

When it has followed a tedious labour, accompanied with long impaction of the child's head in the pelvic excavation, a retention of urine is the first link in the chain of morbid phenomena, necessitating catheterism for the relief of the bladder; and this circumstance should arouse the suspicions of the attendant accoucher, and put him on the alert. The retention may continue for several days—from seven to twelve—and then be converted into complete incontinence, the sloughs of greater or

less extent having fallen, and a continued, involuntary stillicidium will be established.

Such a train of symptoms might possibly be caused by paralysis of the sphincter vesicæ; but the vaginal examination with the finger will generally detect the abnormal rent, and a probe or catheter passed into the urethra will come in contact with the end of the finger. The introduction of the speculum exhibits most satisfactorily, in the majority of cases, to the eyesight, the lesion which the soft tissues have sustained, and confirms the diagnosis.

The poor woman is now reduced to a condition of the most piteous description, compared with which, most of the other physical evils of life sink into utter insignificance. The urine passing into the vagina as soon as it is secreted, inflames and excoriates its mucous lining, covering it with calcareous depositions, and causing great suffering. It trickles constantly down her thighs, irritates the integument with its acrid qualities, keeps her clothing constantly soaked, and exhales without cessation its peculiar odour, insupportable to herself and all around her. In cases where the sloughing has been extensive, and the loss of substance of the tissues great, and where neither palliative nor curable means have availed for the relief of the sufferer, she has been compelled to sit constantly on a chair, or stool, with a hole in the seat, through which the urine descends in a vessel beneath.

As has been stated, the gravity of the case is increased, in proportion to the distance of the perforation from the external orifice of the urethra. When it occurs in the urethra rather more power is retained over the discharge, which may not occur involuntarily; but when the bas pond of the bladder is the seat of the fistula, all command over the discharge is lost, and it flows away constantly; unless the orifice is small, and capable of being closed by the gravitation of the uterus upon it, while the patient is in a sitting or standing position; even then, the urine is liable to be expelled by the expiratory efforts of coughing, sneezing, laughing, &c., the contraction of the diaphragm then forcing down the abdominal viscera upon the pelvic.

As fistulæ vary in position, so do they in shape or figure, size and number. They may be longitudinal or transverse, round or oval, or angular; there may be one or more. I have never seen more than one in any one case. Dr. N. Bozeman, of Montgomery, Ala., records cases where there was a plurality.



According to my experience, the transverse are more common than the longitudinal. Where the sloughing has been great, and extensive losses of substance sustained, the vagina after cicatrization is contracted, its walls rigid and cartilaginous, and its canal obstructed by adhesions and bridles. The size of the opening may vary from that into which the tip of the index finger may be inserted, to one which is capable of receiving several fingers.

Dr. Bozeman, in a letter to me, in reference to cases of this description, says: "In some of them nearly the whole of the septum had sloughed out, thus allowing the whole of the superior fundus of the bladder to protrude through, and appear at the vulva, in the form of a large fleshy tumour. In one case, both ureters were to be seen upon the surface of this tumour, thus allowing the urine to dribble away without even reaching the cavity of the bladder or vagina. Nor was this all: in two instances a portion of the beginning of the urethra had also been carried away in the sloughing process, and the anterior border of the fistula was found finally adherent to the pubic arch."

The *Prognosis*, in cases of this affection, has been hitherto unfavorable, even in such as might appear most within the reach of curative means, regarding their position, size, &c., so that in the majority of instances, little more than palliative measures have been thought of; and, as was once recommended to me by a distinguished surgeon, whom I consulted in a case of this kind, "a masterly inactivity" has been deemed most advisable. The ingenuity of surgeons has been taxed to the utmost in devising means for alleviating the sufferings of those who laboured under this dreadful calamity. Various means were resorted to for protecting the parts which were exposed to the irritating action of the urine, and for rendering the woman as comfortable as circumstances would permit. Emollient baths and unguents were prescribed for the promotion of cleanliness and allaying inflammation; and urinals of different shapes and materials were contrived for the purpose of receiving the urine as it was secreted. Tamponnement, or plugging the vagina, was resorted to as a palliative and curative measure combined, the catheter being retained in the bladder for the purpose of conducting off the urine from the fistulous opening. Dessault was among the advocates for this treatment; and some cures are recorded as having been effected after a very long and tedious perseverance in the course. Such fortunate re-

sults, however, only occurred in cases where the fistula was situated at some point in the course of the urethra; where it was situated above, tamponnement was of no service.

Whether urinary fistulæ in the female are of more frequent occurrence now than formerly, or whether they were overlooked, by reason of the imperfection of the means of investigating female complaints, it is certain that modern surgeons have not rested satisfied with merely palliative measures; and those designed for effecting a radical cure have been essayed with more or less success.

The treatment for the radical cure of the disease may be divided into that by *Cauterization*, and that by *Suturization*. The former may be sub-divided into cauterization by chemical caustics, and that by the actual cautery, or heated iron, or the galvanic spark.

The method by suturization, is susceptible of a subdivision into that which includes autoplasty, or the transplantation of a flap from a neighboring part, and securing it by sutures in the fistulous opening, (the edges of which have been previously freshened with the knife,) and into that, where the edges of the fistula, after having been pared with the knife, are drawn together and maintained in contact by suture.

Another method of cure is mentioned as having resulted favorably—viz: laying open the fistula into the urethra, and healing it as in cases of rectal fistula.

*Cauterization*, as a curative measure, has had its advocates among modern surgeons, the most distinguished of whom are Dupuytren and Liston. When chemical caustics are employed the Nitrate of Silver is preferable. This is only adapted to small fistulæ; it is used for the purpose of promoting granulations on the edges of the fistulous opening, and gradually closing it. Pancoast states that he has, "in this manner, succeeded in occluding a fistula of the size of a large goose quill." For larger fistulæ the actual cautery must be used; its effect is to produce contraction, as is usual with the cicatrices from burns.

When the cauterizing iron is used, it is advised that it be applied at a white heat, for an instant, around the edge of the opening for some distance on the vaginal surface; when the orifice is large, at long intervals; when small, once in three or four days. A late writer advises that the interval should not be less than two or three months, in order to allow time for the contraction of the cicatrix.

Within a short time Galvanism has been employed for the purpose of cauterization in this, as well as other surgical cases, by means of an ingenious portable apparatus.

My note-book contains the following account of the first case of Vesico-vaginal Fistula which it has been my fortune to encounter:—

CASE. August 28rd, 1856, I was called upon to examine a negro girl, the property of Mr. Wm. Gibbons, a large rice planter on the Savannah river. I received the following account of her case:—That she had been delivered a short time previous, after a very severe and protracted labour, of a large dead child. A short time after this, her urine began to flow from her involuntarily; there was a constant stillicidium, which caused much troublesome excoriation of the parts externally.

This history of the case led me to suspect, immediately, urinary fistula, caused either by rupture of vesico-vaginal septum during labour, or by a succeeding slough. As the incontinence did not occur instantly, the latter conjecture seemed more probable. In confirmation of my suspicions, the finger introduced into the vagina, detected a rent in the septum, which seemed to extend through the os tincæ and cervix uteri. A probe introduced into the urethra passed readily into the vagina, and came in contact with the finger in the vagina. The speculum revealed to the eye-sight what the touch had foretold.

The treatment of the case was commenced by placing the woman in bed, and introducing a silver female catheter. The difficulty of retaining this instrument *in situ*, and the insufficiency of its length, allowing the urine to trickle over and bathe the vulva, induced me to substitute a gum-elastic male catheter of the usual length, passed through a small cork as a shoulder, to prevent its slipping too far inwards; a belt, made of saddle-girth webbing, was buckled round the abdomen; a piece of sole-leather, of sufficient length and breadth, was attached to the belt in front, passing down in front of the vulva, and the end of the catheter external to the cork, was passed through a small hole in the leather. A bowl was placed at the end of the catheter, which was allowed to remain open, to receive the urine as it flowed out from the bladder. This rude apparatus was found to answer pretty well the purpose for which it was designed. As, however, the gum-elastic catheter was soon rendered unfit for use by the action of the urine,

and the substitution of a new one every day or two involved a good deal of expense, I obtained a flexible metallic catheter, which I cut of the proper length, and substituted it for the gum-elastic. The patient soon was enabled to wear this instrument, without much inconvenience, it being removed every other day for the purpose of cleaning it. The flow of urine through the fistula having been thus very effectually cut off, the orifice began to contract, and its progress was quite satisfactory until the contraction reduced it to one or two lines in diameter. It then assumed a most tedious and provoking indolence. Nitrate of silver was frequently and repeatedly applied without any visible service. On the 10th of December, (more than three months from the commencement of the treatment,) caustic potash was applied—a part of the vagina, near the fistula, became accidentally touched—a slough  $\frac{1}{4}$  inch in diameter ensued. This ulcer was healed by the application of a solution of sulph. cupri. The effect of the vegetable caustic on the fistulous opening was very slight. After this, the actual cautery was substituted for the chemical. In the course of some weeks, the fistula was reduced to a point, and finally closed—no urine appearing to pass through.

The whole treatment of this case occupied the greater portion of a year, during which time, the woman was kept constantly in bed, and the catheter retained permanently in the bladder. The tediousness and uncertainty of the treatment by cauterization, are insurmountable objections to it, and it will certainly never be employed by those who are acquainted with the more satisfactory and reliable processes which will be detailed in this report.

The merit of having introduced the method of treating this description of case by suturization, has been attributed to Roerhuyzen. Dieffenbach, Jobert, Velpeau, Leroy d'Etoilles, Lallemand, have figured most extensively in this department, and have claimed for themselves a great share of success. Their different methods are very fully detailed in the works on Operative Surgery. The principle common to each method is to freshen the edges of the fistula either by the knife, or cautery, before the sutures are introduced. The idea of applying Plastic Surgery to the cure of the disease originated with Jobert de Lamballe. Leroy and Velpeau have adopted the same plan, with some variations in the manner of executing it. A variety of suturization has been invented by Lallemand, of Montpellier, which consists in draw-

ing the edges of the opening together by means of a species of hooked forceps, and retaining them in contact by means of the same instrument. Finally, in very bad cases, where these different plans have failed, or cannot be executed, Vidal has recommended that the mucous membrane of the orifice of the vagina should be dissected off and the opening be closed by sutures, making a pouch or cloaca of the vagina, for retaining the urine, and with a small orifice for its passage outwards.

The several methods which have been alluded to—the result of the ingenuity and perseverance of European surgeons—are so difficult of execution, and so uncertain in their results, even in the hands of their accomplished authors, that they hold out small inducement for their imitation, and we turn with disappointment and dissatisfaction from their contemplation. Their statistical records contain so large an amount of incurable subjects, that, if we embrace the popular creed in the infallibility of European authority—of hopelessness of success elsewhere, when failure attends on the efforts of those eminent surgeons, whose names have been mentioned, it would seem as if the condition of woman, in a world where her portion of trial has been dealt out with no niggard hand, wanted but this last drop to fill to overflowing, the bitter chalice, which it is her lot frequently to quaff, and that death is the only friend, under such circumstances, to whom she can appeal for relief.

Turning, however, from this gloomy picture, which the records of European Surgery present, in regard to the treatment of this class of affections, and casting our eyes Westward, we see, in that direction, a brighter prospect opening.

America, the land of progress in Science and in Art, has not been behind-hand in this instance, and the superiority of American ingenuity and originality are, as usual, prominent. As Americans—as citizens of the Southern section of our confederacy, we can assert, with truth, and with an honest pride, that in no part of the world, has as much been done in the way of really practical improvement in this branch of Operative Surgery, as by the American surgeons of the South. The records of American Surgery of the last thirty years, contain a comparatively small number of reported cases. As it is probable that cases successfully treated are almost the only ones reported, it cannot be doubted, that a considerably larger number have occurred, which have been

abandoned as incurable, of which the medical public have heard nothing.

The treatment of the reported cases has varied according to the genius and surgical skill of those into whose hands they have fallen. The names which have been most prominently associated with operations for the cure of this disease, are those of Pancoast, of Philadelphia; Hayward, of Boston; Mettauer, of Virginia; Sims, of New York, formerly of Alabama, and Boze-man, of Montgomery, Alabama. All these surgeons have adopted the treatment by *suture*—the edges of the fistula having been first freshened with the knife. The method of each varies in some particulars from that of the others.

The peculiarity of Dr. Pancoast's method consists in shaping the lips of the fistula in such a manner that one is dovetailed into the other, and secured by sutures of silk.

Dr. Hayward, after introducing into the urethra a large whale-bone bougie, in order to bring the fistula more within reach, removes with a knife the edges of the opening all around to the distance of one line, then dissects up the mucous membrane of the vagina to the distance of three lines, in order to present a larger surface for union, and "to prevent the necessity of carrying the needles through the bladder." The needles were then introduced "about one-third of an inch from the edge of the wound, through the membrane of the vagina and the cellular membrane beneath, and brought out at the same distance on the other side." The threads were then "tightly tied," and left about three inches in length. The catheter was introduced and the patient placed in bed on her side, and directed to live on thin arrowroot, milk and water, and solution of gum arabic.

Dr. Hayward reports, in the Boston Medical and Surgical Journal, for 1851, that he has "operated twenty-six times on nine patients—on one six times, another five, two twice, and five once." In three cases the operation was entirely successful; in five, great relief was obtained, so that the urine could be retained for a number of hours; and in the remaining, no benefit was obtained. Since the discovery of the anæsthetic powers of Ether, he places his patient under its influence. The position of the patient is, on the back, as in the operation of lithotomy.

Dr. John P. Mettauer reported in the number of the Virginia Medical and Surgical Journal for June, 1855, that twenty-five

years previous to that period, he had first operated for vesico-vaginal fistula, during which period he had met with many extremely interesting cases, most of which he had treated successfully; that he had expressed the opinion, in a publication on this subject, "that every example of the disease could be cured;" but that since that time, he had met with cases which had defied all his attempts, and induced him to modify his opinion; but that he still believed a large proportion could be cured. His plan of operating is as follows:—The patient is "placed on her back, as for the operation of lithotomy, on a high bed, with folded blankets and sheets under her to protect the bed, the parts being exposed to the strong light of a window immediately opposite to, and on a level with the perineum—care being taken that the nates rest fairly on the edge of the bedstead, so as to render the parts to be operated on, easy of access. A two-bladed speculum is employed for the purpose of dilating the os externum and vagina—the handle of the instrument being held by the patient herself. The free borders of the fistula are next denuded of their mucous membrane, by the use of delicate hooks to take hold of it, and scissors curved on their flat surfaces, or delicate knives curved in like manner, or of the ordinary form, to excise it beneath the hook." The mucous membrane is next to be removed to the extent of half an inch beyond the border, in a continuous strip. For arresting hemorrhage, cold water is to be injected with a syringe. Metallic threads of pure lead, five or six inches long, are then introduced by means of curved needles, held in Physic's artery forceps, and conveying silk ligatures, to which the leaden are attached. The needles are passed from the vesical cavity into the vaginal, one inch from the denuded margin, so as to transfix both vesical and vaginal wall. After as many sutures are introduced in this manner, as are requisite, the edges are closely approximated, and secured in that position, by twisting the wires by means of forceps, adapted to the purpose. Much care and judgment is required, to graduate the compressing force which is applied by the twisting, so that while the edges of the wound are kept in close apposition, the circulation is not arrested, so as to endanger sloughing or ulceration.

The rule by which the surgeon is to be guided in determining the proper amount of force to be applied, is, "the fixed and erected state of the twisted extremities of the wires, and their bristle-like spring when touched with the probe." The wires having been

secured in this manner, "the twisted extremities are to be cut off transversely, so as to project a few lines beyond the range of the vulva." A short silver catheter is now to be introduced, and the patient to be directed to lie on her left side. The bowels are to be constipated by opium. On the third day the ligatures are to be moderately tightened by twisting. The sutures are to be removed about the eighth or tenth day.

Dr. Mettauer remarks that "it is the depth of this suture that secures its reparative efficacy—that is the point on which success turns; and if the denudations are effectually executed, a failure will seldom follow. This suture can be safely passed through the vesical wall, and I decidedly prefer it, because it secures more effectual suturization; and it is entirely free from all liability to induce inflammation of the bladder, as my experience fully testifies."

"The possibility of small fistulous openings following suturizing through the walls of the bladder, is the only danger of importance to be feared; and if the threads are not permitted to remain longer than eight or ten days, this accident can hardly take place. I have often suffered them to remain ten or twelve days, without such an occurrence. In a few hours the ligature openings close,—I have rarely known them discharge urine after a day."

The American Journal of the Medical Sciences for January, 1851, contains a communication from Dr. J. Marion Sims, at that time a resident of Montgomery, Ala., detailing a method of treatment of the cases which we are considering, originated by and peculiar to himself, exhibiting a degree of persevering industry and ingenuity in the invention and perfection of instruments and curative apparatus, deserving of the highest commendation, and entitled to the admiration of every surgeon who feels the amount of interest in this subject which it deserves.

Dr. Sims employs a suture resembling that known to surgeons as the *quilled suture*—using leaden clamps, in place of quills, and silver wire in place of silk thread. Instead of the dorsal position, which is preferred by most surgeons, that on the knees, the body bent forward, head and shoulders depressed, nates elevated, knees separated six or eight inches, is preferred by this surgeon.

The table, on which the patient rests, is placed in front of an open window—the sun's rays are concentrated on the vulva by means of a mirror. The vagina is dilated by a speculum of pecu-



liar form—the part which enters the vagina is made of polished German silver, and shaped like a duck's beak, and is bent at right angles with the handle. This speculum is introduced at the perineal commissure of the vagina, which is above, in this position of the woman; the perineum is forcibly elevated by an assistant holding the speculum by its handle with one hand, and drawing, with the fingers of his other hand, the labium of the side on which he stands—while the other labium is drawn in a contrary direction by the fingers of another assistant standing on the other side. In this manner the whole vagina is perfectly displayed, and a fair view obtained of the fistulous orifice.

With a delicate tenaculum fixed in a handle five or six inches in length, the mucous membrane of the vagina near the edge of the fistula is raised, and with a small sharp-pointed scalpel fixed in a handle of the same length with that of the tenaculum, a strip of vaginal mucous membrane, from  $\frac{1}{4}$  to  $\frac{1}{2}$  of an inch in breadth, is dissected off all around the opening. The lining membrane of the bladder is not removed, unless it is very much altered in character, and projects through the opening so as to interfere with the operation.

The circumference of the opening having been thus thoroughly denuded, a spear-pointed needle, fixed on a shaft about six inches in length, armed with silk thread, is introduced at the distance of  $\frac{1}{2}$  inch from the incised edge of the mucous membrane, only penetrating through the thickness of that membrane, and not entering the cavity of the bladder, and brought out at the same distance from the freshened edge of the posterior or upper lip of the fistulous orifice. The farther end of the silk is withdrawn from the eye of the needle, and afterwards the needle; the proximal end of the silk is then attached to the end of the silver wire, bent into a loop, and by means of the silk, the silver wire is lodged in the proper place. A sufficient number of sutures are introduced, according to the extent of the opening, and both ends of the wires are brought out at the vulva. The distal ends of the wires are now passed through the openings in a leaden clamp of sufficient length, and secured by being wrapped round the clamp; and this last is lodged in its place above the upper lip of the fistula, by making traction on the proximal ends of the wires.

Another clamp of the same length, as the one which has been applied, is now threaded with the ends of the wires, which remain

at the vulvar orifice, and pushed up by means of a species of fork contrived for this purpose. By making traction on the wires, and pushing up the lower clamp at the same time, the edges of the fistula are brought into close apposition. Small bird-shot, perforated with holes, are now run on the wires, and pushed up to the lower clamp, where they are secured by compression with a pair of strong forceps. The wires are then cut off about  $\frac{1}{4}$  or  $\frac{1}{2}$  of an inch below the shot. A catheter is now introduced into the urethra, and removed once or twice a day for cleansing. The woman is confined to bed—diet, crackers and tea; the bowels are kept entirely locked up by the free exhibition of opium. The sutures are examined about the third day, and removed on the tenth or twelfth.

Several very ingenious instruments have been invented by Dr. Sims for facilitating the performance of the operation. A blunt hook furnishes a point of support to the movable mucous membrane, in thrusting the needle through the upper lip of the fistula. A small fork can be used as a pulley for drawing down the upper end of the silk thread and preventing its cutting out; and a wider fork answers for pushing up the clamps and adjusting them.

The catheter, which is peculiar to Dr. Sims, and which he perfected, after many experiments, is shorter than those in general use—merely long enough to measure the length of the female urethra; curved at each extremity, so as to resemble the Italic letter *S*; the end which is in the bladder, curves upwards, and rests behind the symphysis pubis; the external end curves downwards, and rests in front of the meatus urinarius. It acts on the principle of the syphon, and is self-retaining.

[TO BE CONCLUDED IN THE JUNE NO.]

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*The Rationale of the Fatal Tendency of the Warm Bath in Asphyxia.*  
By MARSHALL HALL, M. D., F. R. S., etc.

To the Editor of The Lancet :

SIR,—There is a physiological relation between the circulation and the respiration, any deviation from which, in either direction, is of a fatal tendency.

During the systematic (not the pulmonic) circulation, carbonic acid is formed; in respiration, the oxygen necessary for the formation of this carbonic acid is supplied, and the carbonic acid so formed is evolved from the system.

The immediate baneful effects of the suspension of respiration arise from the privation of oxygen, and from the retention of the carbonic acid previously formed, which becomes a blood-poison.

An animal placed in perfectly *pure nitrogen* or *hydrogen* gas dies in violent convulsions instantly. And this is doubtless owing to the privation of oxygen, for carbonic acid might be exhaled into nitrogen or hydrogen gas.

But an animal dies also in air consisting of such a proportion of *carbonic acid with oxygen*, as to prevent the evolution of carbonic acid from the blood, although the quantity of oxygen might be so great that a taper blown out, and burning only as a *spark*, would be instantly kindled into *flame*.

If without producing effects so sudden as those described, we change the relative proportion of the respiration and the circulation, morbid phenomena are produced special to each case. If the circulation be disproportionately augmented, carbonic acid is formed, and being morbidly retained, slighter convulsion and slower death ensue. If the respiration is unduly and disproportionately augmented, the animal is *cooled*; for mere *pulmonary* respiration is a cooling process, by the difference of temperature of this inspired and expired air, and in this case also the animal dies, but now from loss of temperature.

This latter is the case in the asphyxiated patient, if the respiratory movements be unduly hastened—that is, disproportionately to the rapidity of the remaining circulation.

On the other hand, if in the asphyxiated we excite the circulation, without simultaneously and proportionately inducing the respiratory movements, we destroy our patient by carbonic acid, formed in the course of that circulation, and uneliminated by respiration.

This statement leads me to the proper subject of this paper—the *Rationale of the Injurious and Fatal Tendency of the Warm Bath in Asphyxia*: for it *is* injurious, and has, I am profoundly convinced, of itself proved fatal in cases in which the patient, without it, would have *spontaneously* recovered.

In such a case, it is surely not less essential to the progress of science and our art to remove error than to establish truth.

Warmth is so obviously a stimulus, and a stimulus is so apparently required for a patient taken out of the cold water in a state of asphyxia, that in recommending the warm bath we seem to be addressing ourselves to the common sense of mankind, and it was a step in advance to entertain a *doubt* on the subject.

But when we begin to experiment—when we learn that an animal deprived of respiration by being submerged under water, *lives longer* in *cool* water than in *warm* water, we learn to consider whether in fact, coolness is not more favorable to life in the asphyxiated from submersion, than warmth. We recall to mind, too, that animals bear the abstraction of respiration in proportion to their coolness; the hibernant animals and the batrachian tribes will scarcely

drown at all. If a kitten be first cooled, or if it be immersed in cool water, it will not drown so soon as it would do if submerged at its ordinary temperature in water of the same temperature—facts established by Edwards, by M. Brown-Séquard, and myself, and witnessed by the Secretary of the Royal Humane Society, and by its Superintendent in Hyde-park.

Thus, experiment is made to correct preconceived ideas, however apparently consonant with common sense.

There are other facts which point to modes of treatment of the drowned, which the administration of the warm bath necessarily excludes. If a poor creature be perishing for want of food, we cautiously administer food. If a man be, in like manner, perishing for want of air, should we not administer air? Is this not simple and reasonable? And in the case of drowning, is not the want of air the first condition to which we should bring succour, and the want of temperature the second or third? And should we not administer to the first want? Then, in the case of drowning, we should administer air first and warmth in the second place. But may not the warmth administered without air, do great absolute injury? It raises the temperature, and in so doing augments the necessity of respiration to life.

In the *first* place, if any effect be produced by the warm bath, the circulation is accelerated. But to accelerate the circulation without inducing, at the same time, efficient respiration, is to augment the formation of carbonic acid—the *blood poison*—without its elimination from the system, and it induces, consequently, a fatal result;

*Secondly*, all *excited* respiration through the medium of the cutaneous excitator nerves is excluded, the uniform temperature of the warm-bath excluding the excitants of those nerves arising from the *alternate* application of *heat* and *cold* to the surface;

And, *thirdly*, *imitated* respiration is excluded by the very sustained position of the patient, excluding as it does, alternate pronation and rotation, and pressure applied and removed, or changes of position and compression, which induce respiratory movements.

So that the warm bath is not only positively injurious by *poisoning*, but negatively, by excluding the de-poisoning process.

*Lastly*, the warm bath excludes those frictions of the limbs upwards, with pressure, which really constitute the most effectual means of promoting the circulation and warmth.

Nor is it unimportant to save the *time* expended in preparing the warm bath, or in carrying the patient to it.

And it is scarcely a minor point to direct *all our thoughts and energies*, undiverted, to the important remedies exclusively.

In conclusion, the warm-bath is of *doubly fatal tendency*: it is so in itself positively; and it is so negatively, by excluding every real remedy.

All have heard of the *Grotto del Cane*. The poor dog is put into

the carbonic acid, and taken out asphyxiated. It is plunged—but into a *warm-bath*—but into the water of the adjoining *lago* Aguano, and taken out—restored!

I am, sir, your obedient servant,  
December 15th, 2856.

MARSHALL HALL.

*The Treatment of Asphyxiated Newly-Born Children.*

To the Editor of the *Lancet*:

SIR,—I think it may be well to add the subjoined interesting case to those you have been recording. Already four cases of the restoration of the still-born, and two of drowned persons, in a state of hopeless asphyxia—hopeless under four modes of treatment—have occurred within a few months!

I am, sir, your obedient servant,  
December, 1856.

MARSHALL HALL.

SOUTHPORT, Dec. 15th, 1856.

DEAR SIR,—Every one having a just appreciation of scientific research, ought to make known the results of his experience bearing direct evidence upon the truthfulness of new discoveries.

I feel sure that no one will dispute that Science and Humanity owe much to you for the discovery of the new mode of treating asphyxiated persons, whether by drowning or otherwise. With this idea, I beg to forward the subjoined case to you, not only to bear testimony to the general truthfulness of the theory, but to give you well-merited satisfaction.

I was called to see Mrs. H——, in labor of her first child, on the evening of the 12th instant. The pains continued through the night, and about 8 o'clock the following morning I found it necessary to administer chloroform, the pains were so agonizing. A large child was born by natural efforts at half-past nine, A. M., in a state of complete asphyxia, and the head greatly compressed. After dividing the cord, I proceeded to try your method of establishing respiratory action. I turned the child gently over on the face, rolled it over on the side, and a little beyond, using gradual pressure on the lateral aspect of the chest, back again to a prone position, and so on, about twenty times in the minute. I did it thus frequently because infantile respiratory acts are more rapid than those of the adult. I dashed cold water on the face and chest, slapped the region of the diaphragm with the hand, etc.

After some time the child began to show signs of respiratory power, feeble enough at first, but gradually becoming strong.

I am persuaded this will soon supersede the other method, which I have always considered most unscientific and clumsy; but which, for want of a better one, I have hitherto adopted,

Your method is most easily and readily performed; no time is lost in preparing a hot bath, etc., or in poking the stem of a tobacco-

pipe, or the pipe of the bellows, into the child's mouth—a most barbarous and uncertain way of inflating its lungs, and quite as likely to inflate its stomach instead.

I leave it to your own feeling to publish this or not; you are at liberty to do so if you think proper.

I am, sir, yours truly,

MARSHALL HALL, M. D., F. R. S.

G. B. BARRON.

P. S.—I have the satisfaction of adding a *5th* case of recovery in the still-born infant, I trust in time to be appended to my communication of yesterday.

December 22d, 1856.

M. H.

CARLTON STREET, NOTTINGHAM, Dec. 21st, 1856.

*My Dear Uncle:*—\*\*\*\*\* Early this morning I attended a lady in her confinement. The presentation was a breech one, and there was much and unavoidable pressure upon the umbilical cord, which ceased to pulsate a quarter of an hour before the infant was born. When born the child was quite livid, without perceptible movement of the heart; indeed to all appearance it was dead, and under ordinary circumstances I should not have entertained the slightest hope of its resuscitation. By adopting your method, I had the great satisfaction of seeing it fully restored to life in about twenty minutes, when it cried lustily, the nurse and friends being amazed at the result. Being the only son in a large family of daughters, the parents' delight was proportionately great. I explained to the father that he had to thank you for a living son.

Believe me, my dear uncle,

Your affectionate nephew,

MARSHALL HALL HIGGINBOTTOM.

Dr. MARSHALL HALL.

Hydrophobia, it is true, is a rare disease, but it is a most fearful one, and as the following short article contains a few practical suggestions, and also illustrates the course of the malady very well, we venture to select it for the present number:—

*A Case of Hydrophobia, following the bite of a Dog—Death—Autopsy.* By JAMES B. REYNOLDS, M. D., House Physician to Bellevue Hospital.

James Hutchinson, æt. 16; admitted into Bellevue Hospital, December 13, 1856. (Service of Dr. ELLIOTT.) The patient was a healthy, robust lad, of nervous temperament. During the latter part of August, 1856, while attempting to catch a dog, he was bitten in the left hand, between the index finger and thumb. The dog was not considered rabid, but was immediately killed by the patient

and the wounds, in the course of half an hour, was burned out by nitrate of silver. A man was bitten on the same day, by the same dog, but up to the present time is healthy. The cicatrix has since been the seat of an uneasy sensation; but, with this exception, all went on well until Wednesday, December 10, when his parents noticed that he was dull, and had an undefined fear, not being willing to go out at night, or to be left alone in a room by himself. The morning of Friday, the 12th, he did not eat his breakfast with his accustomed relish, complaining of a general feeling of malaise; he partook of but little dinner. Up to this time, he had complained of no difficulty about the throat; but during the afternoon he began to have some pain over epigastric or lower sternal region, which gradually rose up to the throat, assuming there a choking character. A dose of senna and salts was, during the evening, given to him, which he, by several attempts, managed to swallow; it operated freely; he did no sleep at all during the night, for fear of suffocating. Saturday morning the 13th, a doctor was called in, and pronounced it a case of hydrophobia, and advised removal to Bellevue Hospital. When brought in at a quarter after three P. M., he was very much excited, having considerable difficulty in breathing, the spasms of choking being very frequent and severe; at first, he assumed an upright position upon his knees, with his head thrown back, face and lips, during a paroxysm, becoming of a dusky hue, hardly livid, eyes projecting with a wild-frightened stare and slight external strabismus; considerable jactitation or restlessness; extremities cool and moist, with feeble circulation; respiration was very irregular—a long deep sigh, followed by a succession of short, catchy inspirations—nearly sobbing, together averaging thirty-six per minute; pulse 96, of natural fullness, but very irregular, varying sometimes fifteen beats in a quarter of a minute; he soon became comparatively quiet, when he was able to lie down, with head and shoulders raised. Pulse fell to 86, and paroxysm much less frequent. When first admitted, water was given him to drink, when he became convulsed, but by clutching it with both hands, and making several trials, he at last got it to his mouth, but not more than a tea-spoonful could have been swallowed; the remainder was forcibly ejected. Another attempt was again made after a few minutes, but he was unable to get it to his mouth; his eyes being most of the time turned from it. Upon the entrance of a number of students, he became very much excited, which excitement was much increased, or rather aggravated into a paroxysm, by a draught of air from a window suddenly raised. The convulsion was again brought on by using a fan near him; water was handed to him, and after some persuasion, he forcibly grasped the glass, and gradually bringing it to his mouth, gulped down an ounce or two. A small and imperfect looking glass was then brought near and opposite to him, but with little effect at first, though at last it excited a convulsion. After the withdrawal of the class of students, he became comparatively quiet,

but the spasms were gradually, but perceptibly, increasing in frequency and force.

At five P. M., he was seen by Dr. Elliot, the attending physician. Twenty-four dry cups had just been applied to spine, laudanum 3ij, but with the addition (through a mistake of the nurse,) of gr. vj of the aqueous extract of opium, and powder of assafoetida 3ss, was given per rectum; he drank some water and also some wine.

Seven P. M.,—Another enema of extract of opium and assafoetida, but with only 3i of laudanum, was again given; he now became drowsy, sleeping at intervals, but waking with a convulsion, and much frightened.

Eight P. M.,—Becoming slightly delirious, wishing to rise and dress, as he thought it time to go to school; but upon all other subjects, as far as could be ascertained, he was perfectly rational; his mind was morbidly acute; when asked to do anything, he would immediately control his restlessness or jactitation, and instantly obey, appearing to be very anxious to comprehend and to do what was bidden. About this time he began to have slight spasmodic actions of diaphragm, accompanying or causing the rejection of whatever the stomach contained; the vomiting or rather difficult retching gradually grew worse, until at last, it became one of the most marked and distressing symptoms.

Nine P. M.,—The patient was now seen by Drs. Metcalfe, Wood, Stephen-Smith, and other medical gentlemen. He became much excited by the presence of so many strangers. After becoming calm, Dr. Metcalfe asked him whether he suffered from pain any where; he answered that there was pain in his breast, placing his hand over the sternal region. Water was then poured into a bowl upon the floor, without his knowledge; but the sound caused a convulsion. A speck was then pretended to be seen upon his forehead which was gently blown upon, producing much excitement, and the continuing it brought on spasms; even the breath of the attendant would excite him. Warm milk-punch was then handed to him; as he would allow no one to hold the cup, he clutched it with both hands, and gradually, but spasmodically, near his mouth, he gulped down the whole (about four ounces). Chloroform was then cautiously administered to him; even the vapor excited convulsions; it acted badly, causing lividity of the face, and close contraction of the pupils, which before were dilated; and nearly suspending respiration. He came out of the effects of the anæsthetic with a convulsion. When going under the effects of chloroform, he made some movements which seemed very much like attempts to bite. It was proposed by Dr. Wood to perform tracheotomy, and introduce a tube through which the patient might breathe, instead of through the irritated larynx; but one of the medical gentlemen rather opposed the operation, on the ground that patients with hydrophobia do not die with symptoms of asphyxia. During the evening he said, to use his own words, that "the doctors wished to



make him out mad ; but he knew he was not, because he had killed the dog, and his father had paid the doctor fifty cents for burning out the bite. He had the "nerves." Another injection of laudanum was given, and also brandy by the mouth ; he had already taken about eight ounces of wine, and three pints of milk.

Ten P. M.—Convulsions and vomiting increasing, and opisthotonos more marked. From the horizontal posture, he would suddenly spring upon his feet or knees, and stare wildly at some visionary object, and attempt to get out of its way ; all the time spitting a tenacious, ropy mucus ; head thrown back. About this time, he imagined that he had a pig in his mouth, which he at last, with difficulty, expectorated by the advice of the nurse ; he also complained of a sensation of hairs in his mouth.

Eleven P. M.—He now became quite delirious, calling upon his parents and friends, and at times complained of headache ; pulse too frequent to count, and very irregular. Injections continued.

Half-past twelve A. M.—He was now seen by Dr. Elliot. His tongue was cracked transversely, but not dry ; the saliva, being very tenacious, and streaked with blood, was with great difficulty expectorated. The convulsions gradually increasing in frequency and force, were now very violent, requiring two attendants to hold him ; for as soon as the paroxysms were over, he would immediately sink upon the bed exhausted. He died very suddenly at quarter-past one A. M., on Sunday December 14 ; living from thirty-three to thirty-six hours after the disease showed itself plainly, and ten hours after entering the hospital. His death was from exhaustion. The thoracic walls were immediately compressed : the air within being pressed out, and over the vocal cords, gave rise to a sound of very high pitch ; so natural and shrill a shriek was it, as to startle all present, showing the vocal cords to be in a state of tension. Artificial respiration being continued, the same sounds resulted, but less markedly.

*Post-mortem examination* thirteen hours after death (dictated by Dr. Metcalfe).—Rigor mortis well marked ; body well developed ; foam escaping from mouth ; marks of the dog bite on the left hand at the root of thumb ; tendency to ecchymosis on dependent parts ; scalp congested ; best marked on posterior part of left parietal bone. On making an incision along the back, about 3 iss of black fluid blood escaped ; also blood between bones and membranes of cord ; the spinal cord, on being removed, presented no morbid appearances ; on opening the theca, there was considerable congestion of the vascular membrane, the blood being fluid. On removing the calvarium, the vessels of the dura mater were very much engorged ; on removing this membrane, the pia-mater was found congested ; puncta vasculosa abundant ; contrast great between cortical and medullary substance ; cortical darker than usual. The heart was contracted, showing what formerly would be called a marked case of *concentric hypertrophy*.

It is to be much regretted that a tube was not placed in his trachea as soon as he entered the hospital. Although patients, as a general rule, do not die by suffocation, yet it is conceded that the throat is the principal source of irritation, and from it arises many of the most aggravated symptoms; and the involvement of other parts of the system seems to be secondary, or at least to be aggravated by the spasms of the throat. Now, by the insertion of a tube in the trachea, one source of irritation, the continual passage of air over the irritated parts is removed, and they are allowed to rest; one of the most efficient of nature's means for the restoration of a part to its normal state.

If I was so unfortunate as to be attacked by this awful disease, I would insist upon the introduction of a tube into the trachea as soon as the disease was recognized, and that all remedies should be given per rectum.—[*New York Jour. of Medicine.*

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#### *Treatment of Obstinate Habitual Constipation.*

Habitual constipation, although honored by a distinct name, is really (*says Dr. P. Phœbus of Giessen,*) but a pathological symptom. Yet from its frequent occurrence and its manifold relationship in pathology, it has acquired for itself as much importance as if it were a distinct affection.

Its grave effects upon the whole organization, and also the popular knowledge and recognition of the various remedies used for its amelioration, make it difficult for a rational physician to keep from administering purgatives proper.

Dr. Phœbus gives the following as the most frequent and potent causes. 1st, Too sparing use of ingesta that have a laxative effect. Here particularly should be mentioned water. A great many persons neglect to drink water to slack thirst unless when perfectly convenient, and after a while such prompting of nature is not reproduced to a proper degree. Also from custom many exclude fruit, milk, honey and oleaginous food from their dietary. Others from poverty are unable to procure the above named sorts of food. 2d, Too little exercise. 3d, Sluggishness of the large intestines. This latter is a fruitful cause. As the sphincters of the rectum are under the control of the will, so may the large intestines through the effect of the will in opening the sphincters and moving the abdominal muscles, be subjected to a certain extent to the same influence, as also by direct volition. We of course do not have anything like so direct a power over the large intestines, nor so ready as in the case of the sphincters, and hence the will must act longer before it produces its results. Once effected, however, it will be easier repeated. It will probably require efforts of the will to have a stool through these different means, viz: contraction of the abdominal muscles, and all rectal propulsion we may summon in moderation

for fifteen to twenty minutes. But every time the will is exercised in this way it acquires greater power. The movement of the colon is independent to some extent of the abdominal muscles, and is no doubt directly influenced by the will.

An especial sort of exercise should and may supercede all laxatives. It consists, 1st, In the repeated upward and downward movement of the rectum by the will; 2d, Rapidly repeated drawing in and out the abdominal walls. These should be practiced together, and must be commenced before the patient leaves his room with a determination to have a stool, and when once on the close stool, never to leave it until he has an evacuation. There are other kinds of movements that have a good effect, such as kneading the abdomen, rubbing it, moving the inferior extremities actively for some time; but the simplest and most effectual is the kind of exercise of the parts immediately concerned above directed. An adult ought to have one alvine evacuation every twenty-four hours, unless under special circumstances it is not desired. From costiveness many of the long list of digestive maladies and disordered nutrition occur, and much bodily and mental suffering. The sufferer should at a certain period in every twenty-four hours resort to the exercise recommended, and go to the privy. In a short time, after persevering in this sort of management, six or eight weeks for instance, a person may acquire so much control over the colon that he can expel its contents at will. This is so not only with the young, but also with persons in advanced age. With this the patient may be directed and watched over, as to his ingesta. The habit of drinking water enough may be established by using some of the waters containing carb. acid gas at first, and diluting until this is left entirely out.

A grown person ought in winter to drink in twenty-four hours at least from four to six pounds of water, and in summer nearly if not twice as much. The half should be taken before and the other half after dinner. These potations operate better on an empty stomach.\* To drink much during meal time generally disagrees with most patients, and drinking should be avoided for two or three hours before bed time, as a full bladder during sleep is often the cause of semenorrhœa. Riding and foot exercise does much good in getting rid of costiveness, but is not sufficient. Dr. Phœbus has had twenty-eight years experience in the above management of constipation, and thinks that it is more effectual than all other plans he has ever seen used. He has also seen all the diseases which so often depend upon, and accompany this condition, spontaneously disappear under these means *pari passu* with the costiveness. In cases where this procedure is not practicable, very old persons, those affected with prolapsus uteri, carcinoma recti, pregnancy, etc.,

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\* This is contrary to my experience. I have known large potations of water on a full stomach to produce an immediate desire to stool. In fact, this is a measure I frequently recommend.—TRANA.

he recommends injections of cold water. They should be preferred to laxatives internally, because they may be used for years without injury. And when necessary cathartics themselves should be administered per anum. He never recommends internal remedies of a medicinal character.—[*Prager Vierteljahreschrift. Nashville Jour. of Medicine and Surgery.*

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*On "Phantom Tumours" of the Abdomen.* By E. HEADLAM GREENHOW, M. D., Lecturer on the Public Health at St. Thomas's Hospital, Physician to the Western General Dispensary, etc.

I desire to bring under the notice of the Society a kind of abdominal tumour, often most embarrassing to the practitioner and very alarming to the patient, but of which I have been unable to find an account in any publication with which I am acquainted. We are indebted to Dr. Addison for the elucidation of the true nature of these tumours, and, in speaking of them, I shall adopt the name "phantom tumours," which he is accustomed to use in his clinical teaching at Guy's Hospital. During an experience of many years, I only remember to have met with seven or eight cases of the kind, in each of which I was expressly consulted for the tumour, and not for the derangement of health with which it is invariably associated. Probably, as the disordered health on which they depend is of very common occurrence, I should have met with these tumours more frequently had I sought for them. The five cases the main features of which I intend briefly to detail had all but one been seen by other practitioners before I was consulted. In the investigation of this excepted case, I had, as will subsequently appear, the benefit of being assisted by a leading metropolitan physician.

The first case of the series came under my notice so long ago as fifteen or sixteen years. The subject of it, a married lady aged twenty-six, had already borne several children, was in delicate health, and suffered especially from uterine derangement. She was anæmiated, unable to take active exercise, and complained much of anomalous pains, and of tenderness along the course of several large nerves. The greatest source of anxiety, however, was the presence of a tumour in the right lumbar region, apparently about the size of a cricket-ball, but less regularly round. It appeared to be movable, and if attached posteriorly, to be so only by a narrow pedicle. The impression that it conveyed on a manual examination was that of a loose body floating upon or amongst the viscera. In character, the tumour was firm and unyielding, free from tenderness, and somewhat changeable in site; for although invariably to be found on examination, its precise relative position varied a little from day to day. I have neglected to note how long the tumour had existed, but several opinions had been

taken before I was consulted, and the lady had gone safely and without inconvenience through a pregnancy since its discovery. She had been recommended to place herself in the hands of an eminent surgeon, with a view to the extirpation of the tumour—a procedure to which I most strenuously objected. I have not seen the lady since, but I know that she has subsequently borne several children, and I learnt several years ago that she was in better health, and had undergone no operation; she is, I believe, alive at the present time. The treatment I adopted—chalybeates, and other means likely to improve the general health—was just what I now believe to have been best suited to the case. It would, however, have been most satisfactory to my patient and her family and very conducive to my own reputation, if I had been able to explain the cause of the tumour respecting which they were so anxious, and to assure them that it was but a symptom, and an unimportant one, of a troublesome and tedious but not dangerous malady. Although I was unable to form any satisfactory diagnosis of the nature or connections of the tumour in this case, its history served to teach me that there is at least one kind of abdominal tumour that leads to no ill result, and requires no interference—a lesson by no means devoid of practical value.

The next case, which did not present itself until after an interval of several years, was very similar to the preceding one. It also occurred in a married lady, about thirty years of age, who had recovered imperfectly from her last confinement, suffered from profuse leucorrhœa, and was very feeble and unequal to exertion. The tongue was furred, the appetite bad, and the action of the bowels irregular, diarrhœa alternating with constipation. "Has occasional qualmishness and nausea, frequent occipital headache, and suffers much from abdominal pains unaccompanied by tenderness. She also complains of a contracted sensation across the abdomen." The tumour, which in this case was likewise on the right side, appeared a good deal larger than that already described. Although at first disposed to view it as an ovarian tumour, I abandoned this idea upon a more careful examination, being partly influenced by the circumstance that, although a tumour, apparently as large as a full-sized foetal head, very plainly existed in the right iliac region, the abdomen, on careful measurement, was found not to be really larger on that side. Another very remarkable feature in the history of the case, of which I was assured by the patient herself, but the correctness of which I confess to have doubted,—was that the tumour had entirely disappeared previous to and during the period of her last pregnancy, notwithstanding she had been under treatment for it at an anterior time. Although in a somewhat different situation, I at once referred this case to the same class as the last, and expressed a hope, based upon that experience, that, however troublesome, the tumour would not prove of any serious consequence. This lady is alive, and in the enjoy-

ment of very tolerable health. She has borne several children since the time of my attendance, but of the tumour I know nothing beyond the fact that it has, as I predicted, led to no unpleasant result.

The third case is that of an unmarried lady, aged between twenty-five and thirty, who was believed to be in a state of hopeless illness when she came under my care. The tumour closely resembled both those already described; was more fixed in situation, being in the right hypochondrium; was less movable under examination, and seemed about the size of a large orange. The more prominent symptoms of illness were evidently referable to spinal affection, and under treatment directed to it my patient slowly and gradually recovered. Although I did not at that time understand the connexion between these tumours and spinal disorder, yet relying upon the harmlessness of the tumour in my two previous cases, I treated it as of secondary importance.

The case to which I am now about to refer is, perhaps, the most interesting of the series, for it clearly shows the really unimportant nature of these tumours, and yet how very easily they may be mistaken for examples of serious disease. Mrs.—, aged forty four, having borne a family, had suffered for several years from menorrhagia alternating with profuse leucorrhœa. She had also suffered from a variety of other ailments referable to spinal irritation, itself due, I do not doubt, to the disarrangement of the uterine system. I was consulted by her, somewhat more than three years ago, for a tumour in the left hypochondrium, the appearance of which had been long preceded by occasional attacks of pain in that situation, of such intensity as to make her writhe about in bed, and for the relief of which opiates, even in large doses, were of little avail. This pain was of paroxysmal character, often coming on very suddenly, and sometimes without apparent cause, although more frequently as a consequence of over-exertion. It sometimes lasted for many days without intermission, but with variable intensity. The employment of counter-irritation to the spine, and of tonic treatment calculated to improve the general health and lessen the uterine flux, were of essential service; and when, at a subsequent period, I sought for the tumour it was not discoverable. After an interval of many months I was again consulted for the tumour, which sure enough, had very evidently returned, and is described in my notes of the case as “an ovoid movable tumour, free from tenderness, and apparently floating loose in the left hypochondriac region; it is difficult to estimate its size, but it appears to be somewhat reniform, and at least twice the natural size of a kidney.” It is further added that the patient was in all other respects in good health; that no fulness, tenderness, or pain existed in the posterior lumbar region, and that the urine was normal. Notwithstanding that I believe the tumour to be of the same character with those already related, I thought it desirable that the

patient should have the benefit of a second opinion, particularly as I had been unable to find it on a previous occasion. An eminent physician who was called to my assistance devoted much pains to its elucidation, but without arriving at any more satisfactory conclusion as to its nature than myself. We agreed that it could not be ovarian, from its position; that it was too movable for an enlarged kidney, which was also discountenanced by the absence of any unusual fulness, resistance, or tenderness posteriorly; and that it had not the character, neither had the patient the aspect, of malignant disease. Although in great doubt on the subject, we treated it on the supposition that it might eventually prove a hydatid growth. Some time afterwards other symptoms of spinal irritation manifested themselves; and although I had never seen an avowed case of Dr. Addison's "phantom tumours," I began to suspect that this would prove an example of them, as it subsequently did. The patient, very shortly after the consultation went from under my immediate observation, although she continued to act under my instructions. In the course of a few weeks she wrote me word that the tumour had dispersed; and a few months ago, being again in town, she afforded me several opportunities of satisfying myself that the tumour really was gone.

A few weeks since, I was called in to another case of the same description, which has entirely removed any lingering doubt in my mind as to the nature of these tumours. The patient aged thirty-nine, and married for many years without ever being pregnant, has suffered for sixteen or seventeen years from dysmenorrhœa and from several of the various anomalous affections so frequently found in association with derangement of the uterine functions. She is very prone to attacks of what she calls spasms of the heart; but the ailments which causes most anxiety is a tumour in the left side of the abdomen, just below the margin of the ribs. The tumour is analogous to those already described; is movable, firm, and free from tenderness; but on a careful and somewhat prolonged manipulation, partly frictional, partly kneading, it seems to melt away under the fingers. On examination, very considerable tenderness was found to exist for the space of an inch and a half near the centre of the dorsal vertebræ, pressure by the sides of which produced pain in the chest, and also pain extending round to the left side. Entertaining not the slightest doubt that the tumour here is really a phantom, I have turned my patient's thoughts from its consideration, assuring her that it is unimportant, and am directing my treatment to the alleviation of the spinal irritation and to the improvement of the general health.

In considering the history of the the cases I have described, it is noticeable that all of them were females suffering from some disturbance of the uterine function; and that whilst spinal irritation unequivocally existed in three of the patients, its presence may not unfairly be inferred in both the others. Although I have not

myself seen any examples of these "phantom tumours" in the male subject, I can easily believe that they may occasionally occur under the influence of slight forms of spinal disease. I half suspect that a medical friend of mine, since dead, who had a tumour in the right hypochondrium, which disappeared for many months, during which he was in the enjoyment of good health, and reappeared at a subsequent time *pari passu* with a return of former bad health, was really the subject of one of these "phantom tumours." That such occurrences are much rarer in men, is readily explicable when we recollect the rarity in them of spinal irritation, of the multifarious symptoms of which these tumours are amongst the most important, since, if not understood, their presence may, as in several of the cases I have related, readily lead to the belief that the patient labours under some very serious disease—ovarian, malignant, or cystoid. The real nature of these tumours is spasmodic; their seat probably the abdominal muscles; for although in every instance I have seen, the tumour appeared to be in the abdominal cavity, the melting away of my last case under manipulation is inconsistent with the belief that they are very deeply seated. Their cause is spinal irritation, the irritated spinal nerves producing spasm in the muscles to which they are distributed. I need scarcely observe how entirely this explanation of their character is in keeping with the history of the tumours in the foregoing cases. If it be admitted that they are formed by the spasmodic contraction of portions of the abdominal muscles, it is no longer matter of surprise that patients suffering from their presence should pass safely through pregnancies; that the tumours should cause no actual enlargement of the abdomen; that they should sometimes disappear spontaneously; that having thus disappeared they should sometimes return; that they should be removed under the use of remedies calculated to improve the general health, and to remedy the cause of the local irritation to which they appeared referable; that they should change their relative position from day to day; or, lastly, that they should be temporarily dispersed under the manipulating hand of the physician. In confirmation of the apparent reality of their presence, and of my assertion as to the embarrassment and anxiety they cause to the practitioner who is ignorant of their true nature, I may point to the fact that the abdomen has been laid open by the surgeon at least five times for the removal of abdominal tumours which were found not to exist. Most probably all of these were really examples of these "phantom tumours;" and yet the reality of their existence must, in each of these cases, have been impressed upon the minds of the patients and their relatives, as well as upon that of the operator and his colleagues, before he would have proposed, or they acceded to, so very serious an operation.

I should have been unwilling to bring this subject before the Society in so incomplete a form, and probably would have left it



to an abler hand, had I not learnt in conversation with several friends of wide experience, that they had likewise met with examples of these puzzling tumours, without being aware of their true character. I trust that even this imperfect sketch may lead to the clearer elucidation of the subject, by directing the attention of other observers towards its investigation, and may serve to avert some of the anxiety and doubt felt by myself when the earlier cases came under my care, as well as of the uneasiness experienced by persons suffering from a disease apparently of a serious description, but the precise character of which is unknown.—[*London Lancet*.

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*Treatment of Tapeworm by the Oil of Male Fern.* By Dr. WILLIAM JENNER, Physician to University College Hospital.

In the treatment of tapeworm, we have to keep three objects in view—viz:

1. The expulsion of the entozoon;
2. The prevention of the entrance of another scolex of *tænia* into the patient;
3. The improvement of the health of the patient, so that his intestines may no longer form a favorable nidus for the development of the scolex into a *tænia*.

The two last objects are to be attained by directing the patient to live well, but to avoid pork and imperfectly cooked meats of all kinds. Spices, onions, and garlic, should be used with the food. Spirits and wine are to be preferred to beer. Beer, especially if it contains but little hop, is thought by some most experienced German physicians, to be highly favorable to the development of tapeworm. Mild aperients, vegetable bitters, steel, and zinc, are the medicines in which most confidence is to be placed. Out-door exercise is essential. For the expulsion of the worm, various agents have been employed with success. As the animal increases in length, by the formation of new joints, at the neck, close to the head, it is no matter how many yards are removed, provided the head remains; for, in that case, the worm quickly grows to its original length. No remedy, then, is successful, which does not expel the head. But, although this is true, and tapeworm is a common enough disease, many practitioners have never seen the head of a tapeworm.

The anthelmintics chiefly employed in cases of tapeworm, in this country, are turpentine, kousso, pomegranate, and male fern. The objection to turpentine is its horribly nauseous flavor, and its very unpleasant effects on the head, and occasionally on the kidneys. It is a remedy which should be used only as a last resource. Kousso is expensive and bulky. Pomegranate is bulky and nauseous, and, as ordinarily obtained in this country, not very certain in its action. Male fern has the advantages of being inexpensive,

only moderately disagreeable in flavor, so that children take it readily, of small bulk, perfectly innocuous to the patient, and more certain than the other agents in its action on the parasite. It is one of the oldest of the remedies for tapeworm, and one of the very best. The preparation I have used is the ethereal oil. An aperient was given in the morning, the patient was kept without food for sixteen or eighteen hours, and then one or two drachms of the oil of male fern were administered on a little cinnamon water.

I have noted twenty-four cases to which the oil of male fern was given. Sixteen of these cases were cured by a single dose. In three of these sixteen cases the head was found; three of the remaining thirteen were ascertained to be well two years after the administration of the oil, one a year after, one seven months, two six months, three four months, one three months; and before the other two ceased to be under observation, a second dose was given by way of precaution, as it was to all the patients when the head was not found, without any *tænia* coming away with the stool.

Three required two doses of the drug; in one of these three some yards of *tænia* were expelled by the first dose; for two months after this no joints were found in the stools, then a few appeared, and a second dose was given, and was followed by the expulsion of nine yards of *tænia*; the patient continued well two years after this. In the second case, three yards were expelled by the first dose, and, a month after, five feet by a second dose; at the expiration of four months and a half, the patient continued well; in the third case, five and a half yards of *tænia* were expelled by the first dose, and seven yards by the second, given two months after the first.

Three doses were required in two cases. The first dose of the oil, however, given to one of these cases, was not of good quality. In one of the two, three days elapsed between the first and second dose, and four hours between the second and third. In the other, two days elapsed between the first and second dose, and one between the second and third. In both cases the head was obtained.

In one case, viz., that of a child five years and six months old, between the 15th of July, and the 4th of August inclusive, five doses of castor oil, and as many of oil of male fern, were administered, without a decided effect—a few joints of *tænia* only being expelled. On the 17th of August, twenty grains of the extract of male fern, obtained from Duncan and Flockhart, of Edinburgh, were given without effect. On August 23d, one pint of infusion of pumpkin seeds; on September 1st, decoction of pomegranate; and, on September 5th, infusion of kousso; all produced copious evacuations, but no tapeworm. The child now left the hospital. In November he was re-admitted, and during my absence was treated with success by my friend, Dr. Ballard, with the oil of male fern. This time the child was kept for forty-eight

hours with little if any food, before the oil was given. The child was free from tapeworm some months after he left the hospital.

One man took the oil two or three times without any good effect, but then large quantities of solid fæces were discharged from its action; and before it could be administered in a more effectual manner, the patient escaped observation.

Among those cured by a single dose, and well two years afterwards, was one man who had taken koussou three times, and oil of turpentine twice. Several of the others had taken turpentine and other remedies with permanent good effect. In three cases (children) the patients rejected the oil by vomiting; with one exception, all admitted that it was much less nauseous than castor oil. In no case did it cause griping or other unpleasant symptom. The shortest time after taking the oil, in which the worm was expelled, was half an hour; the longest twelve hours; the ordinary time four hours. A large quantity of tenacious yellow mucus was usually expelled, either with or before the worm, and often, also, when no worm was present, as when the oil was given to ascertain that no worm remained, the head not having been found.

In no case was the worm alive when expelled, and in no case was it expelled entire.

The mode of administering the oil of male fern, I would recommend, after the experience I have had of it, is as follows:—

For an adult, two pills may be taken at bed-time, containing three grains of calomel and eight of compound colocynth pill—the following morning a dose of castor oil. A little broth only should be given till the bowels have been thoroughly cleared out. As soon as that object is effected, one drachm and a half of male fern is to be given on an ounce of some aromatic water; and the dose of oil of male fern is to be repeated in six hours, if the first dose has not proved effectual before the expiration of that time.

For a child, calomel and jalap may be substituted for the colocynth and calomel. The dose of the oil of male fern must be as large for the child as for the adult, seeing that its action is on the parasite, and not on the patient. I have never seen any unpleasant results follow its employment in the child.—[*Assoc. Med. Jour.*

### *Influence of Circumcision in Preventing the Spread of Syphilis.*

Dr. Pasner, editor of the *All. Med. Cent. Zeitung*, makes the following remarks on the above subject:

Every physician who has been engaged in a large practice among the Jews knows that they are very seldom affected with syphilis in utero, and that when thus affected the ulcers heal more readily, and seldom give rise to the secondary form. In the nature of things those chancres that occurred on the inner side of the prepuce and the covered portion of the glans, and by adhesion produ-

ced phymosis, or by constricting the anterior part of this covering hiding deeply penetrating and dangerous ulcers, cannot occur. Hence the treatment is more effective, and thus often prevents the secondary and tertiary forms. Dr. Hutchings was the first to our knowledge, who made observations to precisely ascertain the comparative frequency of syphilis in Jews and Christians, and by statistics settled this *a priori* supposition. He is physician to a hospital in London, to which a dispensary is also attached, and which is situated in a part of the city inhabited mostly by Jews, who resort in great numbers to those institutions for medical aid. The whole number of venereal patients treated there in 1855 was 330, of which 272 were Christians and 59 Jews. Of the former, 107 were gonorrhœa and 165 syphilis; of the latter 47 were gonorrhœa and 11 syphilis. The relative difference between syphilis and gonorrhœa was much greater in the Jews than the Christians, as may be seen by the above figures. The great number of gonorrhœal cases among the Jews treated there, shows that any shyness in applying for medical advice cannot be the cause of the comparative infrequency of venereal diseases among them.

During the same time there were admitted at the hospital 252 children under five years of age. Among them were 179 Christians, and 73 Jewish; of the last, 3 had congenital syphilis, and of the former 27. Of women with venereal diseases there were 97—92 were Christians and 5 Jewish. 61 of the Christian women had chancres. Two-thirds of the 92 were married, and appeared to have contracted it from their husbands. The favorable comparison for the Jewish women partly results no doubt from their strict principles of religion, but may also be somewhat dependent upon the supposition that they would not so readily expose themselves by acknowledging their disease. These facts confirm the wisdom of the old Mosaic rite, and should be a stand point from which the legislator should consider the subject as one of legal hygiene.—[*Nashville Journal of Medicine and Surgery*.

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*Clinical Lecture on Certain States of the Urine Symptomatic of Disease of the Kidney.* By W. R. BARSHAM, M. D., Physician to the Westminster Hospital, and Lecturer on the Practice of Medicine.

*Hæmaturia: Blood in the Urine a Symptom or otherwise?*

The appearance of blood in the urine is always a source of anxiety and alarm to the patient, and if not rightly interpreted may become a source of serious error in treatment. Its importance as a symptom must depend on the part of the urinary apparatus from which it is derived. Its significance, even when coming from the kidneys, is momentous or otherwise according to the character of the accompanying symptoms. It may indicate temporary condi-

tions of disease, to be easily removed by judicious measures ; or it may afford unequivocal evidence of incurable organic mischief. Several cases have of late been in the hospital, and they present the opportunity of explaining to you the force and value of the symptoms by which a correct estimate may be formed of this state of the urine. Hæmaturia may occur in the course of many different diseases. It may be symptomatic of various diseases of the kidney : 1. Simple inflammation or nephritis. 2. The early stage of Bright's disease. 3. Scarlatinal dropsy. 4. Calculous pyelitis, including under this form gouty inflammation. 5. Tubercular pyelitis. 6. Cancer of the kidney. Or, secondly, the hæmorrhage proceeding from the kidneys, may not imply any organic disease of these organs, being symptomatic only of a general hæmorrhagic condition, in which the kidneys participate with other organs ; such is the hæmaturia in purpura and scurvy. It occurs also in some febrile disorders, scarlet fever, variola, and typhus, and it is sometimes prevalent in pyæmia. Moreover, the blood may be derived from the bladder, prostate, or urethra, quite independent of the kidneys. Again, hæmaturia has been noticed, occasionally occurring in women, as vicarious of the menstrual flux, an example of which was lately under Mr. Guthrie, in Percy ward, in a woman suffering from abscess in the mamma. In this case the catamenia had been absent during the previous three months ; but for several consecutive days at the menstrual period blood was passed with the urine. There was no increased frequency of micturition, nor any pain or irritability about the urinary passages. The urine, examined under the microscope, presented blood-discs, amorphous fibrine highly stained with hæmaturia, and a few epithelial corpuscles, apparently from the pelvis of the kidney and ureters. Rayer mentions instances of this vicarious hæmaturia.

There is yet another form of hæmaturia, which appears to be unconnected with any of the preceding morbid conditions, and the only exciting cause which can be detected is mental agitation. If, in particular constitutions, there be this singular idiosyncrasy, that mental inquietude or excitement can bring on attacks of hæmaturia, temporary in their duration, innocent in their sequel, and unconnected with organic mischief in the kidney, it must be manifestly of importance to ascertain if possible the symptoms by which such an unexceptionable and rare form of hæmaturia can be distinguished from the more serious cases arising from calculous or other organic disease.

The case of Edward B——, in Burdett ward, appears to me to illustrate this rare form of hæmaturia, the recurrence of the attack being invariably connected with mental disquietude. He is a shoemaker, forty-three years of age, of spare habit of body. He states that he is a tetotalter, and has been so for years ; that about nine years since he first noticed his urine discolored with blood ; its appearance was unaccompanied by any pain or constitutional dis-

turbance; it alarmed him, and he sought advice. He was ordered change of air, and cessation from his very sedentary employment. He states that he was relieved for the time, but that three years afterwards he suffered another attack. On this occasion he recollects that it was preceded by a sense of weight and pain in the loins. He was treated at Charing-cross Hospital, and on subsequent occasions at other hospitals, always with relief; the continuance of the blood in his urine seldom exceeding ten or fourteen days. During the last twelve months the hæmaturia has become more frequent, and he has had two attacks in the course of the last six months. On admission he complained of pain in the loins, and the urine was highly charged with blood. He is free from all other symptoms of disease: the chest is natural; heart sounds natural; the abdomen is flat, soft, and elastic; there is no fulness in the lumbar spaces, and no tenderness on deep-made pressure; the region of the liver does not exceed its natural limits. The appetite is good, the tongue clean, the bowels natural. Micturition is not more frequent than natural, nor is there any difficulty or pain. The urine is of a dark-red colour, but is free from visible clots; allowed to rest, it deposits abundance of blood-discs. He was ordered to be cupped to ten ounces from the loins; to take five grains of gallic acid every four hours, and half a drachm of the compound jalap powder every alternate morning, and a warm bath each alternate evening. The urine was examined by the microscope: numerous blood corpuscles were visible, and many fibrinous casts entangling blood discs in their substance. These fibrinous coagula had the appearance of having been moulded in the uriniferous tubes, and washed therefrom by the escape of the urine; their size suggested their formation in the straight tubes of Bellini. Ten days after admission, the urine was quite free from all vestiges of blood to the unassisted eye; it presented a faint albuminous cloud by heat and nitric acid, and, allowed to rest, it deposited a flocculent preipitate, which, by the microscope, was resolved into amorphous fibrinous masses, slightly stained with hæmatin; a few blood discs were seen, but no other microscopic objects. The patient is free from all traces of lumbar pain, and he thinks that his bodily strength is increasing. Three weeks after admission, he presents the same favorable condition: no trace of blood or albumen in the urine; the same flocculent deposit of minute amorphous coagula stained with hæmatin; but no casts of the tubes, or any blood discs. The medicines were discontinued. On the fifth week from admission he complains of a return of the lumbar pain, but there is no alteration in the natural appearance of the urine, except that crystals of oxalate of lime were observed interspersed amongst the minute amorphous coagula above noticed. He was discharged in the month of August, 1855, and you have seen him from time to time attending to report his freedom from any return of hæmaturia; but the last visit he complains of great increase of pain in the left lumbar region, extending upwards to the

shoulder of the same side. In October he brings a sample of his urine, and it is again blood-red, and possesses the same characters as when we first examined it; but it is unaccompanied by any constitutional disturbance, and he states that he has no difficulty in passing his urine, nor is there any undue frequency of micturition, nor any local symptoms different from those when an in-patient. He adds an important fact: that these recurrences of bloody urine are always caused by some vexatious mental excitement. The man, it appears, is quiet, sober, and industrious, and, upon principle, totally abstains from all fermented drinks. His wife has no liking for water, but possesses the common prejudice in favor of alcohol, and whenever she can command the means, indulges to excess; her demeanour towards her husband at these times is somewhat at variance with her marriage vows, and to avoid annoyance, our patient states that he has endeavored to effect a voluntary separation; that while he is left to himself, undisturbed, his malady disappears; but the moment he is subjected to visits from an inebriate woman the hæmaturia instantly returns. He has noticed this sequence to be so uniform, that he firmly believes that the vexation and trouble to which he is occasionally exposed are the sole causes of his disease. I am inclined to think the man's inference not so far wrong or unintelligible as it may at first be considered. It may be readily granted that neither anatomically nor physiologically is the connexion between renal hæmorrhage and mental emotion very apparent. It is true that certain mental emotions are known to excite, more or less, the renal functions; but the cases are extremely rare in which a morbid state like hæmorrhage can be traced to a similar exciting cause. The records of medicine, however, are not without such cases. Rayer, in his work on "*Diseases of the Kidney*," in treating of Renal Hæmorrhage, mentions a case of hæmaturia (tom. iii. p. 359,) brought on apparently by no other cause than mental excitement: "*Survenu presque immédiatement après un violent accès de colère.*" The accompanying symptoms were, severe hypogastric pain, with heat and pain in the course of the ureters, and sensation of weight and aching in the region of the kidneys. He was quickly relieved by rest, warm baths, diet, and mucilaginous drinks.

I saw a gentleman last spring, seventy years of age, who suffered from occasional attacks of hæmaturia, traceable to no other cause than mental excitement. There were no gouty symptoms, or the least tendency thereto. He was a remarkably healthy, vigorous country gentleman. He had consulted the most distinguished physician of our day, and whose name is inseparably connected with renal pathology, and whose opinion, as the patient informed me, was in conformity with the views now expressed. This man, B—, has, in the course of the last summer, twice presented himself with a return of the complaint. You have seen him on several occasions. The hæmaturia, when he appeared in June, lasted only three days. On the fifth day, the urine was free from all trace of

blood or albumen. Trouble and excitement preceded the attack. In July, he had another attack; and so dependent is the hæmaturia on mental excitement, that on this occasion a very trivial circumstance seems to have induced it. It was a dispute with his employer as to the rate of remuneration he should receive for work done. On each of these attacks, the symptoms exhibited the same peculiarity; a sense of weight and pain about the loins, but unaccompanied by any constitutional disturbance, greater frequency of micturition, or inconvenience or difficulty in that act.

It is thus by the absence of all the usual symptoms of irritation of the kidney, such as are ever present in gouty inflammation, whether excited by the presence of calculus or not; it is the absence of constitutional disturbance, whether febrile or dropsical; it is the temporary character of the attacks, the urine in a few days returning to a clear and natural state, without any trace of albumen, or any morbid morphological element therein, that justify our excluding as the cause of hæmaturia all those organic diseases of the kidney in which hæmorrhage occupies the position of a leading symptom, and attributing the malady exclusively to the operation of mental excitement. I confess that but for the authority of such an observer as Rayer, or the support which my present views of this case receives from the opinion expressed by the eminent physician to whom I have previously alluded, that I had great difficulty in forming a satisfactory diagnosis of the nature and cause of the hæmaturia in this case. It is only after a very careful observation of the sum of the symptoms exhibited by the patient over a period of more than eighteen months, and observing during that period the strictly temporary morbid condition of the urine, the constant relation of this state of hæmaturia to mental emotion, that I came to the conclusion that the case might fairly be classed with those that Rayer has spoken of under the name of hæmorrhages renales essentielles (sporadiques), and that we might attribute its exciting cause to the rare and exceptionable agency of mental excitement. I am very desirous of keeping this patient under observation, with a view of testing the soundness of the opinion and diagnosis brought before you in this lecture.—[*London Lancet*.

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*Dr. Edward Brown-Sequard's Experimental and Clinical Researches applied to Physiology and Pathology.*

CASES OF CURE OF EPILEPSY BY CAUTERIZATION AND OTHER LOCAL MEANS OF MODIFICATION OF THE PARTS FROM WHICH ORIGINATES THE AURA EPILEPTICA.

There are a great many cases of this kind. They bear out the same conclusion as the cases of section of a nerve, in showing that the fits were caused by a peculiar influence originating from some part of the skin. Cauterization of the skin of the face and neck by the red-hot iron, in my animals, seems to cure them, as I



will show hereafter. It appears, therefore, that there is something of the same kind in the condition of the skin of the neck and face in these animals, and in the parts of the skin which are the seat of a true aura epileptica in man.

The most varied modes of cauterization have been employed with success against the aura epileptica. Blisters, moxas, potential cauteries, issues, Dippel's oil, a decoction of ruta graveolus, and various other rubefacients have been successful in cases reported by Locher, Baster, Dovinetus, Brunner, Stuerlin, Henricus ab Heer, Benzi, Portal, Recamier, &c.

It is useless to mention any of these cases particularly, because there are so many on record that every one knows some of them.

The application of a moxa or of the red-hot iron, is, I believe, the best means of cauterization—at least it is so for animals: and the many cases in which epileptics have been cured by a burn (see Portal, *loco cit.* pp. 160 and 172.) agree in showing the power that burning of the skin possesses. In a case by Tulpus (see Herpin, *loco cit.* p. 399,) the aura came from the big toe, and the patient was cured by deep burnings of this toe with the red-hot iron.

Any kind of change in the skin may be the cause of the appearance of epilepsy or of its disappearance. A man, says Esquirol (*loco cit.* p. 304.) had an ulcer on one of his legs; epilepsy came on after the cicatrization of the ulcer, and each fit was preceded by the sensation of a cold wind in the cicatrix; a ligature above the knee-joint stopped the fit. A young man, whose case is recorded by Pouteau (quoted by Portal, *loco cit.* p. 375,) had received a blow on the head, and the wound was cicatrized only a year after; he was then attacked with epilepsy, and the fits gradually became more and more frequent. After having been a year in this condition, he consulted Pouteau, who opened the cicatrix by the application of the cautery. From this day the fits disappeared; but the patient allowed the wound to be healed again, and epilepsy returned. It disappeared again, after another application of the caustic.

Perhaps various operations which had been followed by the cure of epilepsy, are to be explained in the same way as the many cases related in this paragraph. This is true, perhaps, for a case mentioned by Delasiauve (*Traite de l' Epilepsie*, p. 430,) and in which, after the extirpation of an encephaloid tumor in the angle of the jaw, an epileptic patient was cured. This explanation is probably good, also, for some of the cases in which trepanning of the cranium has been successful in epileptic patients. Among the cases of this kind that I know, I take four, almost at random, to show the fitness of this explanation. In one of them a circumscribed and permanent pain in the head, led Dr. James Guild to apply the trephine. The patient was cured—(Delasiauve, *loco cit.* p. 422.) In another case, Dr. Campbell (*Annals Med-Psychols.* Vol. XIII. p. 613) applied the trephine on the cranium of a man who had received a blow, and who suffered a great deal from the wound it had produced. No

more fits took place, and four years after the operation the man was still well. In a third case, recorded by Benjamin Travers (*A further Inquiry concerning Constitutional Irritation and the Pathology of the Nervous System*, p. 285,) the trephine was applied in a place where the cranium was depressed and painful to the touch. The patient was cured. The fourth case I will give in full, as it has not yet been published, and also on account of its importance. I owe the history of this case to Professor Van Buren, of New York, and I give it just as it has been furnished to me by this distinguished surgeon:—

CASE IX.—‘A healthy married woman, twenty-six years of age, received a blow upon the side of her head from the clenched fist of her husband, who was intoxicated. The seat of the injury remained permanently tender to the touch, and about five months afterwards she had an epileptic fit for the first time. The fits recurred from this time in gradually diminishing intervals, and when she was admitted into the New York Hospital, in March, 1856, about three years after the injury, they occurred almost every day.

‘Over the centre of the parietal bone of the right side, a portion of the scalp, about the size of a half dollar, was very sensitive on pressure, but no appreciable lesion could be discovered, except perhaps, a slight puffiness of the integuments at this point. She suffered much from headache, the pain always commencing here, and seeming to radiate from this tender surface to the rest of the head. Before a seizure of epilepsy this local pain, which was always present, invariably became more intense.

‘After watching the patient for some weeks, during which time the fits were evidently becoming more frequent, it was observed that she was worse at her catamenial period. In fact, upon the 5th and 6th of April she had no less than twenty-seven distinct seizures. Her memory and other intellectual faculties were observed to be decidedly impaired. In other respects her health was good. Valerianate of zinc was tried in doses of two and three grains three times a day during a fortnight, but without benefit.

‘It was then decided, in consultation, to explore the condition of the scalp and cranial bone at the seat of pain, and to remove a portion of the bone, if it showed any evidences of disease. This was done on the 10th of May. The patient was etherized, and a free crucial incision made through the scalp. The periosteum was found more than naturally adherent to the bone, the surface of which was somewhat elevated and roughened over a space an inch and a half in diameter. This altered portion of the bone was removed by two applications of the trephine; its inner surface was found to be perfectly normal, but its diploe was obliterated.

‘The wound was closed accurately, except at the point where the incisions crossed, and cold water dressings applied. No fit occurred until the 18th of May, when she had three during the day

and evening, followed by active febrile symptoms with nausea, and on the following day an erysipelatous blush appeared upon the forehead. On the 19th and 20th she had three fits, but they were not very severe. The attack of erysipelas lasted the usual time, and proved to be rather a severe one. The wound of the scalp healed kindly and uninterruptedly, and at the end of the erysipelas was entirely cicatrized (May 27th). After the seizure, which occurred on the 20th, there was no return of the epilepsy. The patient was retained in the Hospital until after a menstrual period, and as this did not take place at the usual time approximate remedies were employed, but it was not until the sixth week that the catamenia returned, so that the patient was not discharged from the Hospital finally until July 10th, having had no fit meanwhile.

The epileptic fits which occurred on the 18th, 19th, and 20th of May, coincidently with the invasion of the erysipelas, seem to have taken the place of the usual chill, as her attack commenced without one; and they were the only fits which occurred after the operation of May 10th.

I have seen the patient twice since her discharge from the Hospital, once within the past month (November), and she is in perfect health, having had no threatening whatever of an epileptic fit since those which ushered in the attack of erysipelas.

The extirpation of two pieces of altered bone in this case has certainly not been the cause of the cure of the patient, as there have been fits after their removal. We are led, therefore, to admit that the cure was the consequence either of the influence of the erysipelas or of a change that took place in the skin while the wound was healing. There are cases on record where either erysipelas, or some other febrile disease, seems to have cured epilepsy; but this is so very rare, that it is much more probable that in the patient of Dr. Van Buren the cure has been effected by the change that the operation has produced in the skin, just where the blow which had caused the epilepsy had been received. The frequency of cures of this convulsive disease by anything that may produce a change in a part of the skin, which, being injured or the seat of a pain, has caused epilepsy, renders it very probable that in this case the cure has been obtained by the change produced by the operation.

While I think that Dr. Van Buren deserves great eulogy for this bold and successful operation, I nevertheless ought to say, that with the knowledge I have now that epilepsy originates very frequently in the skin, it would be necessary in the future, in cases like those I have just recorded, to employ various means of cauterization, and particularly the application of a red-hot iron upon the injured skin before making use of the trephine. Very likely cauterization, in a number of cases, will prove sufficient to cure.

Perhaps we are authorized to place the cases we will speak of now, among those in which the skin was a source of an aura epileptica.

J. Carrol (*Journal Général de Médecine*, vol. xiii., p. 242) relates the following case:—

CASE X.—A child, eleven years old, had fits of epilepsy two or three times a week, since he was two years old. A feeling of cold, coming from one of the upper extremities, preceded the fits. A ligature having been applied around the arm, and tightened at each threatening, the fits were avoided. A small tumor was then found on the first phalanx of the thumb, and to ascertain if this tumor was the cause of the fits, although it did not produce pain, the ligature was placed successively on the hand and on the thumb, and the fits were prevented. An incision was then made upon the tumor, and four very small bodies of hard sebaceous matter were taken out. The wound was excited to give much pus, and healed after thirty days. The child was completely cured, and has never had a fit since.

Portal (*Anatomie Médicale* vol. iv., p. 247,) gives the case of a woman whose fits began by a pain in the thumb. Leduc, a pupil of Portal, extirpated a hard portion of the skin (a bunion, very likely—*un durillon*), and the patient was cured.

A strange body in the ear had caused epilepsy. Fabricius Hildanus extirpated it, and the patient was cured. (Esquirol, *loco cit.* vol. i., p. 303.)

Esquirol says (*loco cit.* vol. i., p. 303): ‘Donat attended a nun who felt, in the beginning of the fits, a pain in the right mamma, from which the aura ascended to the brain: if an ulceration took place in the mamma the fit was prevented.’

Although the skin is more apt to produce epilepsy than the trunks of nerves, there are many cases where an injury to the trunk of a nerve has caused this disease. Such cases have been recorded by De Haen, Henning, Larrey, Romberg (*Nervenkrankheiten*, 3d ed., vol. i., part 2, p. 689) and others. I will relate some cases of this kind to show that for them, as for those in which the aura epileptica originates in the skin, the same principle is true, that an interruption between the injured part and the brain is able to cure epilepsy.

Portal (*Observ. sur l'Epilepsie*, p. 210) gives the case of a man who had a nerve injured in the arm. Convulsions, with loss of consciousness, came on many times. A greater incision was made where the wound existed, and the patient was cured.

The same writer (*loco cit.*, p. 156) speaks of a man who had received a pistol shot in the neck, and who had become epileptic. After some time an abscess was formed in the neck; one of the shot came out, and the patient was cured.

Dieffenbach (*Die Operative Chirurgie*, vol. i., p. 852) relates the case of a young girl, whose hand had been wounded by a piece of bottle-glass. Neuralgic pains, epileptic fits, and contraction of the limb, had been the results of the wound. The cicatrix was opened, and a small bit of glass was found near a nerve which had been

divided by it, and which was swollen and hardened. After the operation, the neuralgia, the epilepsy, and the contraction vanished, and the girl was completely cured.

Fizes, according to Portal ( *loco cit.*, p. 157), has seen a man who had become epileptic after having been wounded by a sword near the great angle of the eye, and who was cured after the extirpation of a small part of the point of the sword which had staid in the wound.

Cases, more or less resembling the preceding, have been reported by Lamotte, Van Swieten, Sauvages, De Haen, Burserius, Lamortier, &c.

Darwin reports that he once saw a child who frequently fell down in convulsions. A wart was found on the ankle, which was cut off, and the fits never recurred.

Epilepsy caused by the irritation of the dental nerves, and cured by the extirpation of some teeth, or by the lancing of the gums, is not uncommon. Some interesting cases of this kind have been reported by Portal ( *loco cit.*, p. 205, and elsewhere).

I shall not speak here of the cases of epilepsy produced by an irritation of a mucous membrane, or of a viscus, and which have been cured by the removal of the irritation. These cases are very numerous, and they also prove that epilepsy may be cured by the suppression of the irritation of nerves, either in their peripheric ramifications or in their trunks.—[*Boston Med. and Surg. Journal.*

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*On the Use of Belladonna in Diseases of the Eyes, especially in the Medical Treatment of Cataract.* Translated from the *Revue de Thérapeutique*, by the Editor.

"There has always been (says Scarpa) physicians who pretended to cure cataract by medical means. The assertion has often been denied, because not well understood. We have seen that the lens rendered opaque by congelation becomes clear on the application of warm water; it is, therefore, not impossible that certain forms of opacity may disappear by proper treatment. But what are the means to obtain this result in the living eye? We know nothing of them."

This short extract from a man so eminent proves that it is not impossible to cure cataract without an operation. Now to effect this end two methods present themselves; the one to restore transparency to the lens, the other to remove it from the pupil or to induce its absorption or resolution.

The first of these methods appears to us to be illusory, for we conceive it to be as difficult to restore an opaque lens as to renew a necrosed bone or tissues affected with gangrene. The annals of science do not, perhaps, present a single authentic instance of lenticular cataract cured in this way.

As to the second mode, there is more reason in it.

This, in fact, is the way that nature proceeds in her attempts to cure the disease. We should then seek to find the modes which she adopts to obtain this important result, in order to accomplish the same purpose by therapeutic agents at our disposal, that is by art, which is nothing more than imitation of nature : *ars imitatio nature*.

Cases of spontaneous cure of cataract are now rare : a great number may be found in the annals of medicine.

Doctor Ware reports several cases of traumatic cataract in which the lenses were entirely absorbed, so that the patients were afterwards obliged to use convex glasses. Percival Pott also (*Surgical Works* translated into French 1777, vol. ii. p. 510.) Callisen says he saw a cataract cease by absorption. Tenon reports in his memoirs that the crystalline lens had been absorbed. M. M. Rennes, P. Delmas, Manoury, Velpeau, &c., also cite cases of the same kind.

This phenomenon is explained by the rupture of the anterior capsule, which permits the aqueous humor to dissolve the lens. Such is the opinion of Mackenzie, Professor Rosas, of Vienna, &c. The experiments made by Duterich, on wounds of the lens and its membrane, and the analogy which exists between this spontaneous cure, and that obtained by tearing the capsule with a needle passed through the cornea, are in favor of this opinion.

M. Sichel also says that traumatic cataracts cured without operations had the capsule torn. But this is not all ; the lens is sometimes detached from the ciliary processes and the hyaloid membrane spontaneously, and the patient recovers vision suddenly. This displacement is observed after a violent concussion, but its most common cause is softening of the vitreous body. This species of trembling of the vitreous humor is communicated to the lens ; and is followed at length by rupture of the union of the lens to the ciliary zone.

The lens is depressed below the margin of the pupil as in cases where the operation had been performed.

From this short review we see that the spontaneous cure of cataract may be effected under two conditions. The question occurs whether, by the aid of belladonna, we may not produce these two conditions, and obtain by its prolonged use, analagous results. It is known that the most ordinary complications of cataract are adhesions between the posterior surface of the iris and the interior of the lens. Now, if in this particular case a dilating substance be used for a length of time the anterior capsule will be broken. The lens is then in immediate contact with the aqueous humor. This rupture of the capsule would not appear impossible when we remember its delicate character, and the facility with which it is torn, in the operation for extraction.

But the case which we proceed to examine is an exception. Let us see if in ordinary cases the Belladonna may be used with propriety, If we place, for instance, this solution in an eye affected with cataract formed or forming, the expansion of the iris will affect

the capsule through the adhesions. We may thus understand that if the movements be continued for a long time the rupture of the connections between the capsule and the ciliary zone may take place; or, indeed, if not sufficient for this, they may be sufficient to change the normal relations of the opaque lens, and place it in a condition favorable to absorption. We were led to these reflections by the following case which we published in 1855. About a year before, a man applied to us, aged about 45 years, with cataract in both eyes, of 6 months' duration. The cataract in the left eye was very distinct; the patient could see well enough to walk alone. During the last few weeks the sight was diminished daily. We directed him to put one drop of concentrated solution of belladonna in the left eye every morning. Our object was to keep up vision as long as possible before performing an operation, which we considered inevitable. The patient called upon us about a month afterwards, and much to our surprise informed us not only that he was not worse, but that the opacity was considerably diminished. The vision was so much improved that he could attend to his ordinary occupation, which was that of a miller. He had followed my directions closely, and called to know if he should continue. We did not see him afterwards. The Dr. reports another case, complicated with neuralgia, in which the cataract appeared to be dissolved and vision restored. And still another where the lens was but imperfectly depressed after an operation. After six months use of the remedy the pupil was restored and the vision very good. He mentions still another case, in which Velpeau, after an operation for depression, and the lens had risen to its place, resorted to the belladonna treatment until the lens was absorbed.

The *Annales d'Occulistique*, July 1855, reports the following case of traumatic cataract cured by the application of Belladonna. In November, 1850, M. Quadri was called to see a goldsmith who had received a blow on the left eye while he was working, with a blow pipe. This was eight days before; violent pains in the head, inflammation of the cornea, of the iris and of the choroid; he was nearly blind; by the use of baths, calomel, tartar emetic, leeches, arnica, collyria, and frictions of belladonna ointment on the upper lid, the pain and inflammation ceased. M. Quadri used strong belladonna ointment (equal portions of extract and of lard) which produced forced dilatation of the pupil. The cataract could thus be seen to its full extent, and the displaced lens having lost its nutrition was nearly atrophied. M. Quadri postponed the extraction of the lens to a more favorable period and recommended the use of belladonna. After some days, the lens fell into the anterior chamber, where it was rapidly absorbed: so that 22 days afterwards there remained only a slight opacity on the posterior capsule, a small cicatrix on the cornea, and a slight violet color on the sclerotic coat. Vision was rather feeble. Having occasion to see the patient some time after, M. Quadri was surprised to find the eye restored to its

natural appearance. This case proves that the use of belladonna by causing movements of the iris may displace the lens, and place it in condition favorable to absorption. Are we not authorized from the above facts to try belladonna in all cases of cataract? Whether formed or forming, capsular or lenticular, spontaneous or traumatic, complicated, or not, with adhesions. The practice presents the following advantages:—1st. It does not injure the eye. 2d. The patient can make the application himself very easily. 3d. If persevered in regularly it will retard the progress of cataract, and in favorable cases induce its absorption. 4th. It will always prolong the vision of the patient, and sometimes give him light enough to dispense with the operation. 5th. In all cases, as we have seen, it will prevent adhesions between the lens and the iris, or destroy them when they exist. 6th and finally, resorted to sometimes before an operation, the latter is rendered easier, more prompt, and success is more constant, as is explained by Scarpa in the following extract:—"The most common obstacle to success, in any method of operation for cataract, is not the lens, but its capsule, especially the anterior capsule. It is desirable that art should possess some easy method in all cases, of separating entirely the capsule with the lens from the ciliary zone." Now we think that this view expressed by Scarpa may be realized by belladonna. The following case appears to demonstrate it.

"I operated towards the Spring of last year on double cataract in a patient who had used belladonna for several months, which permitted him to walk alone, and attend to some slight business. I operated by depression on both eyes in the presence of his family physician who assisted me. I was struck with the facility with which the lens went down, it almost went itself at the first touch of the needle in both eyes; but slight inflammation followed, and the success was good in both eyes. I have operated in a number of double cataracts by depression, and know that the operation is not always so simple. I am led to believe that the belladonna favored the separation of the pupil from the lens."—[Dr. ROUAULT. *Philadelphia Med. and Surgical Journal*.

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*Epidemic Cerebro-Spinal Meningitis, in Elmira, Steuben Co., N. Y.*  
By FRANK H. HAMILTON.

Having occasion to visit Elmira, in Steuben Co., N. Y., during the last week, I was requested by Drs. Flood and Purdy, to see a case of epidemic cerebro-spinal meningitis.

I found a lad, about eight years old, apparently dying, after an illness of four days. He was lying with his head strongly drawn back, as in opisthotonos; deglutition was difficult; the pupils of his eyes possessed their natural impressibility to light, but he was unable to speak. The functions of his mind seemed to be unimpaired. His pulse was rapid, but not so feeble as his dying appearance had



led me to think I should find it; indeed, the very intelligent gentlemen who were in attendance, said that this condition, of general appearance was sometimes present a long time before death. Upon his body were numerous petechiæ, now very much faded, but which were at first quite dark.

The father of this child had died a few days before, in the same manner, after an illness of forty-eight hours.

This epidemic commenced in February, during the prevalence of the south wind, and after the disappearance of the snow. Scarletina, in a mild form, had preceded it as an epidemic. It was, thus far, confined to the valley in which the village of Elmira is situated, and had occurred mostly among the poor, yet not entirely. The family whose house I visited, was in a comfortable dwelling, and in easy circumstances. The soil of this valley is composed chiefly, I think, of sand and gravel, and allows the surface to become easily drained. It is probable, however, that a substratum of frost has not permitted this drainage to be complete during the period of the present epidemic.

In all, twenty cases have occurred, of which only four had recovered. It was not confined to any period of life.

The usual signs which characterize the disease, are a general malaise, coldness of the extremities, and of the face, nose, chin, ears, while the head is rather warmer than natural; stupor, occasionally delirium, and sometimes no cerebral disturbance whatever. The head is gradually drawn back, and the muscles of the neck become rigid. Often, no pulsation can be felt at the wrist, when the physician is first called. The stomach and bowels are not much, if at all, disturbed. Petechiæ occur at an early period.

The plan of treatment adopted has generally been stimulating: such as alone seemed to be indicated. Hot baths, medicated with cayenne pepper, mustard, brandy, &c., also hot mustard cataplasms, and frictions. Internally, the patients have taken brandy, camphor, quinine, &c.

Since I have returned home, Dr. Flood has informed me that fifteen more cases have occurred, of which four terminated fatally within from one to two hours after the accession of the disease; but that under the plan of treatment described, four others, who were seen within from twenty to thirty minutes after the attack, recovered.—[*Buffalo Medical Journal*.]

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### *Etherization in Convulsions.*

Dr. N. J. Knight communicates to the Boston Medical Journal his experience with ether in controlling convulsions, and especially the convulsions of children, as follows:

"I think etherization in cases of convulsions in children and adults, is not fully known and appreciated. To every case of teething convulsions, in my practice for the last three years, I have adminis-

tered the pure sulphuric ether, and immediate restoration has followed with the most pleasing effect.

"A severe case of puerperal convulsions occurred in my practice last month. A lady who had, at three previous pregnancies, miscarried at periods varying from four to seven months, was taken with the usual symptoms of abortion, and sent for me in haste. Perfect quiet and an anodyne were prescribed; the alarming indications soon passed off, and I left. About three o'clock the next morning I was sent for, and found the patient recovering from a convulsive fit. Bleeding, a cathartic, cold to the head, sinapisms, to the neck, legs, etc., did not prevent the recurrence of three more convulsions in less than ten hours, when I commenced the administration of sulphuric ether, and although no more convulsions occurred, it was not until near the end of forty-eight hours that the nerves became so calm as to allow the ether to be omitted altogether. Ten days from the first attack the lady was delivered of a seven months' child, which had evidently been dead from the time of the first convulsion.

"I have had a severe case of convulsions of a married lady, this week, and etherization shortly restored the patient to a healthy condition.

"I consider ether really the only safe and efficient remedy for convulsions of *teething children*, or adults, now known to the Profession. Probably the half is not yet learned that etherization can accomplish for suffering humanity."—[*Cincinnati Med. Observer*.]

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*On Fissure of the Anus, and its Radical Cure, without a Bloody Operation.* By DR. CHAPPELLE. (Read before the Academy of Medicine, Paris. (Translated from the *Gazette Hebdom.*)

There is in this disease a neuralgic element which is its principal constituent. This accounts for the inefficiency of the therapeutical agents employed for the cure of the wound alone. All topical agents which do not act vigorously upon the neuralgic element, have been and cannot fail to be powerless. Among the curative means prescribed for this affection, the incision of the sphincter, used by Boyer, and since his time, adopted by most modern surgeons, has been the most successful. This operation acts in the same manner as the division of nerves in other neuralgias. Observation shows that the therapeutical result is the same whether the section is made at some distance from the muscle, or near to the fissure itself, another proof that the erosion of the mucous membrane is of but slight importance in this disease.

It was the decision as to the neuralgic character of this affection which led me to the discovery of a means for curing fissure of the anus, as simple as it is efficacious. Chloroform dissolved in alcohol is the means with which I have invariably succeeded.

I diminish or increase the proportion of chloroform according to

the degree of sensitiveness of the patients. Ordinarily, I use the following:

|               |          |
|---------------|----------|
| ℞. Chloroform | 1 part.  |
| Alcohol       | 5 parts. |

I proceed as follows: With the fingers of the left hand I separate the borders of the anus, then I introduce deeply into this opening a badgers hair brush, previously saturated in the chloroform solution, and then withdraw the fingers. The sphincter naturally presses upon the brush, expresses the liquid which it contains, which acts rapidly upon the contracted tissues, produces a severe and penetrating heat upon the contaminated surfaces, and particularly upon the points where the fissure exists. Soon after the abnormal contraction ceases, and the patient only feels the effect of the liquid applied.

This mode of treatment is quite inoffensive. It has no other inconvenience than the local and immediate pain which follows the application of the chloroform liquid, but this disagreeable sensation soon passes off. Fourteen cases of anal fissure are reported, in which this means was used with constant success. Of these fourteen cases, four were cured by a single application: six by two; in three others it was necessary to have recourse to it three times; and in one, only, four applications were necessary before a cure was obtained.—[*American Medical Monthly*.

#### On Urticaria. By Professor BUDD.

Nettle-rash may be produced in various ways; but its most frequent cause, and that which especially concerns us at present, is the imperfect digestion of particular articles of food. Among the substances that have been observed to bring it on, are shell-fish, especially crabs and muscles, pork-pie, fish, when tainted or out of season; honey, mushrooms, cucumbers, almonds and oatmeal. The symptoms are too well known to require notice. The main object of treatment is to expel as soon as possible the offending matter. The stomach should first be emptied by an emetic of ipecacuanha or sulphate of zinc, and the bowels then cleared by a warm but quickly-acting purge. To allay the cutaneous irritation, Dr. Budd is in the habit of prescribing a lotion, made by mixing half a drachm of acetate of lead and half an ounce of tincture of opium with eight ounces of water.

In those cases in which the nettle-rash seems to be referable to several substances in common use, rather than to one special substance, it may sometimes be kept off by the administration (before dinner) of the rhubarb and ipecacuanha pills, or of a few grains of rhubarb. Dr. Budd gives a case which shows, very satisfactorily, the occasional efficacy of rhubarb in this disorder.

"It sometimes happens (says he,) especially in women, that the nettle-rash though depending immediately on the stomach, occurs only when digestion is weakened by over-fatigue, or by profuse monthly discharges, and that remedies of a different class are avail-

ing. In some such cases, when all the means I have before spoken of had failed, I have known the eruption to disappear under the use of carbonate of ammonia, alone or in conjunction with the tincture of gentian."—[*British and Foreign Med. Review.*]

*Upon a Method of Treatment Preventive of Puerperal Fever.* By M. PIEDAGNEL. (From the *Gaz. Médicale.*)

M. Piedagnel communicated to the Academy of Sciences, Paris, in its sitting of Nov. 24, 1856, the following note upon a method of treatment preventive of puerperal fever:

During an epidemic of puerperal fever, at Paris, lying-in women were distributed through the various hospitals, and a certain number were received into the wards at Hotel Dieu, under the charge of M. Piedagnel. Conscious of the uncertainty of medication against this disease, M. Piedagnel thought it might not be impossible to prevent its occurrence, and forthwith endeavored to discover the means.

Knowing that quinine had often been employed with advantage in this disease, and that it prevented the access of pernicious intermittent fever, a disease usually more severe than puerperal fever, and recalling that during the cholera of 1853-54 he had obtained undoubted preventive results from its use; knowing also that iron, which has a positive action upon all the economy, has also been employed with advantage against puerperal fever, it seemed that by associating them, good results might accrue from their administration. But as puerperal fever ordinarily commences suddenly, and is not always preceded by any partial alteration, he thought the administration of these medicaments, which could not produce any injurious result, might be made before the appearance of the disease, when its irruption was feared.

The patients he received were well watched, and kept carefully clean. The windows of the wards were kept open almost all the time, even at night, when the weather would permit; fire was kept day and night in the stoves, so as to produce currents of air, and the treatment used was as follows:—

As soon as a woman entered the wards to lie-in, or if she had been delivered, she took two pills, each containing about one and a half grains of quinine and fifteen grains of sub-carbonate of iron, and in the evening the same quantity; and as long as she remained in the hospital she took morning and evening the same dose, drinking linden-flower water and a bottle of Spa water. All the functions were watched and preserved as much as possible in their physiological integrity. This was the treatment in simple cases, but in those in whom the signs of the fever had become developed, the dose of the medicament was increased progressively each day as high as 5, 10, and 15 grains of the sulphate of quinine, and of a 3j. to a 3iss. of the iron. As soon as the symptoms became milder, the amount of the medicaments were reduced.

Of 94 women delivered under his care, only one died of puerperal fever contracted in his wards.—[*American Med. Monthly.*

*Medicinal Substances introduced into the Large Intestine by Enemata.*  
By M. BRIQUET. (From the *Gazette Hebdomadaire.*)

M. Briquet read before the Academy of Medicine, Paris, Session of Dec. 30, 1856, a paper entitled "Upon the Absorption of Medicinal Substances introduced into the Large Intestine under the form of Enemata," from which he drew the following general conclusions:—

1. The liquid comprising the enema can easily reach the cœcum, and consequently come in contact with a very extensive absorbing surface.

2. The mucous membrane of the large intestine and the fluids which cover its surface, have no chemical action upon the substances introduced into the large intestine, and that there is no absorption of anything which was not primitively in solution.

3. When any of the soluble salts of quinine are administered in enema in doses below fifteen grains, a little more than a third of the quantity administered is eliminated, and consequently has been absorbed.

4. When more than fifteen grains are administered it is not tolerated well, and only a fifth or a sixth of it absorbed.

5. At whatever dose the sulphate of quinine may be given, it produces ordinarily the cerebral symptoms, very slowly and very imperfectly.

6. Traces of elimination and consequently of absorption, are not observed till an hour after the administration of an enema, and then it is very slight.

7. The duration of the elimination is generally quite short, and ordinarily from two to three days at the longest.

8. The greater or less quantity of the liquid, yet limited to a certain degree, the more or less viscid nature of the liquid, and finally the addition of the salts of morphine to the alkaloids of cinchona, do not sensibly modify the absorption.

9. Young people absorb better than adults; old people of both sexes badly.

10. The alkaloids of cinchona administered in enemata in doses below fifteen grains, can produce, in this way, all the effects to be expected from the exhibition of these alkaloids in small doses, by the mouth, and can very well take their place.

11. The same is not true of those cases where a large dose is required; there is not sufficient absorption to produce the severe stupefying effects.

12. More than thirty grains of sulphate of quinine at a time cannot generally be tolerated by the large intestine.

These conclusions are applicable, more or less, exactly to the different substances employed in enemata.—[*Ibid.*

## EDITORIAL AND MISCELLANEOUS.

### STATE MEDICAL SOCIETY.

The annual meeting of the Medical Society of the State of Georgia was held in this city on Wednesday, the 8th of April. We were pleased to see so large a number of the members in attendance, and we are confident that they had no cause to regret the sacrifices they may have made to be present; for the meeting was one of very considerable interest. Several very able and instructive Essays were read, which were received with marked attention. At the next meeting, we trust that the number of Essayists will be greatly increased. The Society has many members who are in possession of rich stores of observation and reflection, the communication of which would do honor to themselves, and prove highly advantageous to the Profession, and to mankind.

After the adjournment of the Society, the members partook of an elegant entertainment which had been prepared for them by the Physicians of our city, and then parted with feelings of mutual respect and good will, to meet again at Madison on the second Wednesday in April, 1858.

The proceedings of the meeting, which have been promptly furnished us by the Secretary, we, as the organ of the Society, herewith present.

*Proceedings of the Annual Meeting of the Medical Society of the State of Georgia, held in Augusta, April 8th and 9th, 1857.*

The Society assembled at 10½ o'clock, in the Presbyterian Lecture room, and was called to order by the 2nd Vice-President, Dr. S. W. Burney, of Forsyth.

The Recording Secretary being absent, Dr. Eben. Hillyer, of Atlanta, was requested to act as Secretary, pro. tem.

The following regular members were present:—

|                                     |                              |
|-------------------------------------|------------------------------|
| Dr. Richard D. Arnold, of Savannah. | Dr. L. A. Dugas, of Augusta. |
| " Joseph A. Eve, " Augusta.         | " Henry F. Campbell, " "     |
| " Lewis D. Ford, " "                | " R. C. Black, " "           |
| " M. H. Oliver, " Atlanta.          | " Eben. Hillyer, " Atlanta.  |
| " R. Q. Dickinson, " Albany.        | " J. M. Turner, " Augusta.   |
| " W. S. Jones, " Augusta.           | " A. Means, " Oxford.        |
| " J. G. Howard, " Savannah.         | " S. W. Burney, " Forsyth.   |

The proceedings of the last annual meeting, held in Macon April 9th, 1856, were read and approved.

On motion, the rules were suspended, and the following gentlemen, on written application, were duly elected members of the Society:

Prof. Jesse Boring, of LaGrange; Prof. Joseph P. Logan, of Atlanta; Prof. John W. Jones, of Atlanta; Drs. Wm. S. Meiere, of Madison; John B. Hendrick, of Covington; G. L. McClesky, of Madison; N. F. Powers, of Thomson; V. H. Taliaferro, of Atlanta; Olin S. Means, of Oxford; T. C.

H. Wilson, of Atlanta; E. J. Roach, of Pulaski; W. H. Doughty, of Augusta; W. L. Felder, of Augusta; W. T. Grant, of Columbia; R. H. Eaton, of Laurenceville; M. J. Jones, of Warrenton; A. T. Jenkins, of Greene Co.; J. W. Gairdner, of Augusta; J. T. Dickinson, of Albany; S. S. Crawford, of Augusta; T. B. Ford, of Augusta; De Saussure Ford, of Augusta; H. R. Casey, of Columbia; J. C. Carroll, of Lawrence Co.; E. B. Hook, of Augusta; E. H. W. Hunter, of Louisville; D. W. Marks, of Augusta; D. W. Young, of Augusta; H. H. Steiner, of Augusta.

The election of officers being next in order, a ballot was ordered, and the following gentlemen were duly elected for the ensuing year:

Dr. S. W. BURNET, of Forsyth, President.

" H. F. CAMPBELL, of Augusta, 1st Vice-President.

" T. C. H. WILSON, of Atlanta, 2nd Vice-President.

On motion of Dr. Arnold, of Savannah, the offices of Corresponding and Recording Secretary, and Treasurer, were consolidated.

A ballot was then ordered, and Dr. EBEN. HILLYER, of Atlanta, was declared unanimously elected.

The selection of Delegates to the American Medical Association being next in order, a Committee of five, consisting of the following gentlemen—Drs. Dickinson, Dugas, Arnold, Taliaferro and Means—were appointed by the President to select them, and report at their earliest convenience.

The Society then adjourned until 3 o'clock P. M.

#### AFTERNOON SESSION.

Society called to order by the President.

Reports from Auxiliary Societies being called for—Dr. E. Hillyer presented a Report of the organization, officers and members of the Auxiliary Society in the city of Atlanta, which, upon motion, was received and adopted, and ordered to be put among the records of the Society.

The Committee to appoint Delegates to the American Medical Association, reported the names of the following gentlemen:—

Dr. W. S. Meiere, of Madison; Dr. J. G. Howard, of Savannah; Dr. Jesse Boring, of LaGrange; Dr. Joseph P. Logan, of Atlanta; Dr. Wm. S. Jones, of Augusta; Dr. George F. Cooper, of Americus; Dr. N. F. Powers, of Thomson; Dr. Eben. Hillyer, of Atlanta; Dr. T. S. Powell, of Sparta; Dr. R. D. Arnold, of Savannah; Dr. H. R. Casey, of Appling; Dr. Henry Gaither, of Oxford; Dr. S. W. Burney, of Forsyth.

The Committee also reported the following:

*Resolved*, That should any of the gentlemen appointed be unable to attend, that they be authorized to appoint their own alternates.

The report was received and unanimously adopted.

The reading of the Essays being next in order, Dr. Kollock, of Savannah, read a very elaborate and interesting paper upon Vesico-Vaginal Fistula.

The Society then adjourned until ten o'clock Thursday morning.

THURSDAY MORNING, April 9th.

Society met pursuant to adjournment. Minutes read and approved.

Upon a written application, the following gentlemen were duly elected members:—Dr. W. T. Hollingsworth, of Morgan; Drs. Robert Southgate, J. W. Dent, S. H. Lamar, C. R. Walton and Charles Palmedo, of Augusta; Dr. Thomas S. Powell, of Sparta.

On motion of Dr. Means, it was

*Resolved*, That those gentlemen of the Society who were appointed to read Essays, at the present meeting, and may have prepared them—but who have been unavoidably prevented from attending—be requested to furnish their papers, at their earliest convenience, to the Editors of the Southern Medical and Surgical Journal for publication.

On motion, for the benefit of new members, the Secretary was required to read the Constitution and amendments of the Society. Also, that the Editors of the Southern Medical and Surgical Journal be requested to publish the same in the pages of said Journal.

Dr. Joseph A. Eve, by appointment, read a paper, upon the Diseases of the Cervix Uteri, which was listened to with much interest by the Society.

Dr. L. A. Dugas contributed a full and interesting paper upon Fractures of the Scapula.

Dr. Dickinson, of Albany, offered the following:

*Resolved*, That the thanks of the Society be tendered Drs. Kollock, Eve, and Dugas, for the Essays read by them before the Society; and that they be requested to furnish copies for publication in the Southern Medical and Surgical Journal—which was adopted.

The Society then adjourned until 3½ o'clock, P. M.

AFTERNOON SESSION.

Society called to order by the President.

Dr. Hunter offered the following resolution:—

*Resolved*, That O. S. Proffit having been found to have been ineligible at the time of his election to membership in this Society, the Secretary is hereby instructed to erase his name from the list of members—which was unanimously adopted.

A Committee, consisting of Drs. Means, Grant, Ford, Jones and Campbell, were appointed to select Subjects, and appoint Essayists, for the next annual meeting.

The selection of the place for holding the next annual meeting being now in order, a ballot was ordered, and upon counting the votes, it was found that Madison, Morgan county, had received a majority.

Dr. Thomas S. Powell, of Sparta, was elected Orator, for the next annual meeting, and Dr. W. S. Meiere, of Madison, his alternate, should he be unable to attend.

The Committee on Essays, made the following report of Subjects and Essayists for the next meeting—which was received and adopted:



Dr. J. G. Howard, of Savannah—On Uterine Disease.

Dr. E. J. Roach, of Pulaaski—On the Propriety of Surgical Operations about the Joints.

Dr. H. F. Campbell, of Augusta—On the Rectal Administration of Medicine.

Dr. J. M. Green—On the Value of Echarotics in the Treatment of Cancer.

Dr. R. D. Arnold, of Savannah—On the Pathology and Treatment of Yellow Fever.

Dr. Ira E. Dupree, of Twiggs—On the Treatment of Prolapsus.

Dr. Eben. Hillyer, of Atlanta—On the Physiology of Menstruation.

Dr. V. H. Taliaferro, of Atlanta—On Obstetrical Surgery.

Dr. N. F. Powers, of Thomson—On Diseases of the Skin.

Dr. W. S. Meiere, of Madison—On the Use of Alcohol in Typhoid Fever.

Dr. R. Campbell, of Augusta—On Wounds of the Abdomen.

Dr. I. P. Garvin, of Augusta—On Nervous Irritation of the Stomach.

Voluntary Communications from any member of the Society are earnestly requested, and will be gratefully received.

The following, offered by Dr. W. T. Grant, was adopted :

*Resolved*, 1st. That the Medical Society of the State of Georgia return their sincere thanks to the Trustees of the Presbyterian Church, for their kindness in extending the convenience of their Lecture room to the Society.

2nd. That the thanks of the Society be extended to the Profession, and the Citizens of Augusta, for their liberal hospitality and kind reception of the members of the Society.

Dr. Campbell offered the following, which was adopted :

*Resolved*, That the funds of the Society, now on hand, as by report of the late Treasurer, be placed in the hands of the President and Treasurer, to be used in procuring such Artistical Illustrations as may be deemed necessary for the Articles published under the auspices of the Society.

The following gentlemen were appointed on the Committee of Arrangements for the next meeting:—Drs. H. J. Ogleby, E. E. Jones, John B. Crawford, and G. L. McCleskey.

Dr. Hunter offered the following :

*Resolved*, That the thanks of this Society be tendered the President and Secretary, for the faithful manner in which they have discharged their respective duties.

The following, by Dr. Arnold, which was adopted :

*Resolved*, That the thanks of the Society be presented to the Press of the city, for their courtesy extended to it as a body.

A motion was passed, instructing the Secretary to have published the resolutions of thanks to the Trustees of the Presbyterian Church, the Physicians, Citizens, and Press of Augusta, in the Augusta papers.

Dr. Grant offered the following, which was adopted :

*Resolved*, That this Society do now adjourn, until the second Wednesday in April, 1858, to re-assemble in the town of Madison, Morgan Co., Ga.

EBEN. HILLYER, M. D., *Sec'y and Treasurer*.

As we are constantly importuned to send virus, we call the attention of our readers to the following circular, by Dr. W. H. Ford, of Charleston, South Carolina :

"Physicians wishing *Vaccine Virus*, by addressing Dr. William Hutson Ford, City Vaccinator, Charleston, S. C., and enclosing one dollar, will receive, by return mail, ten points, or a set of glasses, charged with fresh lymph, or, if particularly desired, a recent scab. Seventy-five points, or seven sets of glasses will be sent for five dollars."

A PAPER FOR THE PROFESSION.—The "North Carolinian," (Fayetteville,) edited by the spirited and talented W. F. Wightman, Esq., formerly of this city, contains the following evidence of orthodoxy, which we quote as a rare morceau for the Profession. Quackery must ever flourish while it can command the power of the Power press, and will languish in death when she withdraws her influence :

"We frequently receive proposals from quacks and other impostors, to publish their medicines, or wares, at such rates as we would not allow to our immediate patrons at home. And it is not unfrequently the case that we receive some such a proposal as this :—

"Will you publish the enclosed advertisement of my Philo-Sanative Elixir for one year, and take twenty bottles of the Elixir in payment for the same? If so, please insert immediately and send me your paper regularly."

"We usually put such documents in the fire, or devote them to other uses not contemplated by their knavish authors."

*Syphilisation.*—This is an attempt to saturate the system with the syphilitic virus by repeated inoculation, until the poisonous influence can no longer be communicated, with a view to the final relief of the constitutional disease, or a prophylactic like vaccination for smallpox. The practice has been once condemned by the French Academy of Medicine, but subsequent experiments, made mostly upon children laboring under the hereditary form of syphilis, have drawn attention to it again, and the prescription is made in both French and German hospitals. If its utility should be established, it may afford a hint as to the treatment of other contagious diseases.—[*Memphis Med. Recorder.*]

*Poisoning from Wafers.*—Dr. Vernon in the *Union Medicalé*, details the case of a young girl sixteen years of age, laboring under a depraved appetite, who ate a large quantity of wafers. In a few hours afterwards she was attacked with strong convulsions and torturing pains, and could with difficulty be held upon the bed. The countenance expressed great suffering, and the breathing was laborious and somewhat stertorous. The jaws were forcibly closed, the lips violet red, the eyeballs prominent and staring, and the pupils extremely dilated. Pulse 126–130 in the minute, and the skin dry and hot. Tenderness upon pressure about the umbilicus, the abdomen hard, and the walls retracted, nausea, but no vomiting. When the limbs were not firmly held the patient was constantly writhing, twisting and throwing herself in every direction, and screamed violently. In spite of all the remedies used for her recovery she expired in ten or twelve

hours from the attack. Upon analyzing the wafers, it was ascertained that they contained a large quantity of chromate of lead, hence it was inferred to be the poisonous agent, and the case set down as one of the many cases of lead poisoning.—[*Nashville Jour. of Medicine and Surgery*.]

*Chlorate of Potash*.—"The chlorate of potash possesses a peculiar influence over all inflammatory and ulcerative affections of the mouth. Although these disorders may be dissimilar as to cause, nature, degree, tissue affected, and common only in being situate in the mouth, they are all equally amenable to its control. For infants of one year, five grains is an ordinary dose; for an adult, a scruple or half a drachm. If the disease be acute, you may push it further by giving it more frequently; if it be carried too far, it will excite purging, but if given in smaller doses, disappointment will only ensue. If properly administered, its virtues and potency are indubitable. \* \* \* \* \*

"The two following conclusions appear to be warranted by the facts which have been adduced:—

"1. That chlorate of potash possesses a peculiar influence over all inflammatory affections of the mouth. (The syphilitic, perhaps, excepted.)

"2. That chlorate of potash possesses a peculiar influence over inflammations attended with phagadæna or sloughing, on whatever part of the body situated."—[J. HUTCHINSON, *Braithwaite's Retrospect*.]

*Wounds of the Tongue*.—"When the tongue is wounded, for example, by a tooth accidentally driven into it, the closeness of the tissue renders the forceps useless. You must transfix the bleeding orifice of the vessel with the tenaculum, and tie in a small portion of the surrounding texture."—[D. KNOX, and *Ibid*.]

*Perchloride of Iron*.—"Dr. Dowler reported, in the N. Orleans Medical and Surgical Journal for September, a case of a troublesome and alarming hemorrhage following the extraction of a tooth. After trying various remedies, without success, he saturated some lint with the perchloride of iron and placed it in the socket, when the bleeding ceased."—[*College Journal*.]

*Affection of the Tonsil*.—Dr. Andrew Clark related the case of a gentleman who, whilst at breakfast three weeks since, was seized with a violent expiratory effort, attended by vomiting, consequent upon a particle of food having escaped into the trachea. He shortly afterwards expectorated a small body, having somewhat the appearance of a hydatid. A few days afterwards he brought up a similar substance. Some doubt existing as to the nature of the body, Dr. Clark was consulted. The patient was a stout, healthy man, but rather thinner of late, on account of anxiety respecting the nature of his malady. The chest was healthy, and the general health good. On examining the throat carefully, he observed a small elongated body attached to one of the tonsils, which, on removal, proved to be one of the follicles of that gland, elongated, enlarged, and full of fluid. The substances formerly expectorated were of the same kind. The patient soon recovered.—[*London Lancet*.]

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## ORIGINAL AND ECLECTIC.

### ARTICLE XVII.

*Fractures of the Scapula.* By L. A. DUGAS, M. D., Professor of Surgery in the Medical College of Georgia. (Read before the Medical Society of the State of Georgia, at the Annual meeting in Augusta, April, 1857, and ordered to be printed.)

The object of this paper is to take a hasty view of the injuries to which the Scapula may be subjected, to direct special attention to fractures of the Neck of this bone, and to relate two cases presenting important peculiarities hitherto unnoticed by systematic writers.

Fractures of the Scapula are comparatively rare: a fact that may be attributed alike to the security of its position and to the yielding nature of its attachments. In consequence of its mobility, shocks which might otherwise occasion serious fractures, are rarely followed by anything more than a contusion of the soft parts. A fracture of this bone may therefore be usually considered as indicative of a very considerable degree of violence.

The relative frequency of Fractures of the Scapula may perhaps be inferred from the statistics of Middlesex Hospital and of the Hotel-Dieu. In the former of these institutions, according to Lonsdale, out of nineteen hundred and one cases of Fracture there were eighteen of the Scapula, of which eight implicated the body, eight

the acromion process, and two the neck of the bone. (Pirrie's *Sys. of Surg.*, p. 146, Am. ed.) At the Hotel-Dieu there were but four Fractures of the Scapula in twenty-three hundred and fifty-eight cases. (Malgaigüe. *Tr. des Fract.*, &c., p. 498.) On the other hand, I have seen, in my private practice alone, four cases of Fracture of the Scapula, although the number of other fractures has not been unusually great.

Fractures of the Scapula may implicate the body of the bone, its spine, its processes, or its neck. Let us study them in each of these regions.

The *body of the scapula* may be fractured by violence directed against the back of the thorax, such as blows with a club or other heavy missiles, the kick of a horse, &c. I saw an accident of this kind resulting from the fall of a portion of the plastering in the ceiling of a high-pitched apartment. The person was seated, and was probably leaning forward when the heavy mass fell upon the scapula. In another instance that came under my observation, the body of the scapula was fractured by the hoof of a horse in running over the man. In such cases the true nature of the injury is considerably masked by the violence done to the soft parts, which are necessarily very much contused, sometimes considerably ecchymosed, and soon become the seat of tumefaction and great soreness. The patient will soon find all attempts to use the arm attended with pain over the whole of the scapular region, and the careless observer might easily overlook the deep-seated injury. But if the surgeon will place the fingers of one hand upon the inferior angle of the bone so as to fix it against the thorax, while he seizes the shoulder with the other hand and imparts motion in various directions to the humeral portion of the scapula, crepitation may be detected more or less distinctly. This may sometimes be facilitated by elevating the humerus at the same time. In the first case to which I just referred as having come under my observation, the patient would herself occasionally feel the crepitation on endeavoring to carry the elbow upwards or backwards, and would compare the sensation to that which might be occasioned by one edge of the bone slipping over the other. Under such circumstances, the hand of the surgeon applied flatly upon the scapula, would enable him to perceive the crepitus. By causing the patient to fold his arms across his breast, the scapula becomes more prominent, its general shape may be better defined,

and the surgeon may, by measuring its diameters, establish a comparison with that of the uninjured side. Malgaigne (Tom. 1, p. 502) advises the forearm to be flexed and the hand to be carried forcibly back of the thorax, for the purpose of rendering the scapula more prominent, and consequently thus to facilitate its inspection. It must be confessed, however, that although the judicious surgeon will rarely fail to detect the existence of a fracture of the body of the scapula, it is always difficult and often impossible for him to determine the precise locality, shape, and extent of the injury.

The muscular masses between which the body of the scapula lies will usually prevent much displacement of the fragments, unless the inferior angle of the bone be alone separated, in which case the displacement is sometimes very marked. There are, however, some cases cited by Malgaigne and by Lonsdale in which the displacement of the fragments was very remarkable. In these cases the fractures were below the spine and in the long diameter of the bone, so that the action of the *Teres major* may have caused the displacement of the lower fragment. But this state of things may also be attributable to the combined influence of a laceration of the muscular layers and of the inefficiency of the retentive means subsequently used in the treatment.

In the *treatment* of these fractures, attention should be directed to the injury of the soft parts, as well as to the solution of osseous continuity. There may be a laceration of the skin alone, or of this and the muscles, down to the bone, thus constituting a compound fracture; or the contusion may have affected the tissues so seriously as to be followed by suppurative inflammation. If there be a compound fracture the wound should be carefully explored, and any detached fragment of bone immediately removed. The edges of the wound should then be approximated by means of adhesive plaster, taking care, in bad cases, to place a small tent in the wound for the escape of any pus that may be formed. In short, this should be treated upon the general principles applicable to other compound fractures. If the laceration does not expose the bone, the case will be managed as other lacerated wounds: by adhesive plasters and cold water dressings. In cases attended with mere contusion, the application of cold water, or of evaporating lotions, will usually suffice to abate the tendency to inflammation. Leeching may sometimes become necessary. Should

suppuration ensue, an exit should be made for the pus as early as possible, in order to prevent its diffusion between the muscles.

At the same time that treatment is being thus directed to the soft parts, measures should be taken to maintain the fragments in their proper position and to prevent any motion between them. Many plans, more or less complicated, have been devised for this purpose. The simplest will, however, be found to be the most comfortable to the patient, and probably as effectual as any other. I would therefore, with many of the best authorities, advise a sling to be placed under the elbow in such a manner as to bring this close to the chest and slightly forwards, at the same time that the force be so directed as to carry the shoulder upwards and a little outwards. By attaching to the ends of the sling slips of bandage, these may be carried around the thorax and arm so as to prevent any motion of the limb. This apparatus is much the same as that I usually apply for fractures of the clavicle, with the single exception that the elbow should not be carried so far forwards in fractures of the scapula.

Fractures of the *spine of the scapula* may accompany those of the body of the bone, or may exist independently of these. Malgaigne (T. I, p. 499) says, that he knows of no instance in which the spine alone has been broken. Yet they are mentioned by Paulus Egineta, Ambrose Paré, and modern writers of distinction. By endeavoring to fix the scapula while motion is imparted to the spine through the acromion process, or by more direct manipulation, crepitation may be usually produced. In some cases the prominence of the spine will be diminished more or less considerably; but the tumefaction, which soon ensues, may prevent this from being apparent. I need scarcely add, that the *treatment* of such cases should be similar to that recommended for fractures of the body of the bone, properly so called.

*Fractures of the Acromion Process.*—The acromion is generally thought to be more frequently broken than any other portion of the scapula. Such is not the result of my observation, for out of the four cases of fracture of this bone which I have seen in my private practice, this process was found to be broken only once. According to the statistics above referred to, the acromion was fractured in eight out of eighteen cases of injury of the scapula. Malgaigne thinks the accident not so common as fractures of the body of the scapula. Yet, from its superficial and exposed posi-

tion, it would seem to be natural that it should be more frequently injured than any other portion of the bone.

The acromion may be fractured at any point, from its extremity to its connexion with the spine of the scapula; and although the fracture is usually transverse, it may be more or less oblique. The extent of displacement will vary according to the seat and completeness of the fracture. If this be near the extremity, and especially if the periosteum be but slightly torn, there may be very little displacement, and the diagnosis will be correspondingly obscure. The difficulty will be increased by tumefaction, and if the patient be fleshy. But when the solution of continuity involves a larger portion of the process, and the periosteum is completely divided, the fragment will be drawn down by the weight of the arm, there will be an obvious drooping of the shoulder, and the finger carried along the upper border of the acromion will more or less readily detect the displacement and seat of fracture. The depression of the shoulder, which might at first induce the suspicion of a dislocation of the humerus, can be easily overcome by pushing up the elbow, and is again reproduced by allowing the arm to hang down. Crepitation may be detected by the fingers placed upon the shoulder while the humerus is alternately forced up and down from the elbow, or carried horizontally, or rotated, as circumstances may require, so as to rub the fractured edges together.

The patient usually complains of the dragging weight of his arm, and of soreness and pain in the affected region, which are increased by efforts to elevate the arm. The inability of the patient to carry the hand to the head, or even to elevate the arm to a less degree, will necessarily be more or less marked, according to the seat and extent of injury to the bone, as well as of the contusion of the soft parts. Indeed, a mere contusion of the deltoid may render these movements very painful, or impossible, in some cases, and thus mislead the careless observer. The only reliable symptoms are the unevenness of the upper border of the acromion, the mobility of the fragment, and crepitation.

The injury may coincide with a dislocation of the acromial extremity of the clavicle, or with a fracture of this bone also. This complication will not materially obscure the diagnosis, unless the detection of the accident to the clavicle be calculated to throw the surgeon off his guard and to induce a neglect of the proper exam-



ination of the acromion itself. It is only in this way that we can explain the unfortunate errors recorded by Sir Astley Cooper and others.

It is generally conceded, that although a fracture of the acromion may be united by bone, it more frequently happens that the bond of union is fibrous. Malgaigne thinks the osseous union more probable, when the periosteum is but little torn and the displacement consequently slight, than in cases in which there is a complete solution of continuity in the periosteum and considerable separation of the fragment.

Some deformity may therefore remain under the best management, and with or without impairment of motion and power in the limb. The danger of such results will, of course, be much increased by any negligence on the part of the patient in seconding the efforts of the surgeon.

*Treatment.*—In the management of this fracture, to use the language of Sir A. Cooper, "the head of the os humeri is the splint which is employed to keep the acromion in its natural situation." This distinguished surgeon advises the elbow to be maintained at a little distance from the thorax, by means of a cushion placed between it and the side, at the same time that it is carried a little backward and pressed upward by a roller-bandage. In this manner the deltoid is somewhat relaxed, and the head of the humerus keeps the fragment properly elevated. He objects, I think very properly, to the axillary pad recommended by some. I would prefer the sling bandage I am in the habit of using in fractures of the clavicle. (See *Southern Med. and Surg. Jour.*, for 1852, p. 69.) This consists of a triangular bit of shirting, with three or four yards of three inch roller-bandage sewed on to each of the acute angles of the cloth. The elbow being placed in the position above indicated, with a cushion between it and the side, is then, by means of the sling carried under it, pressed upwards with the force requisite to restore the fragment of the acromion to its proper place; and the limb is secured in this position by carrying the ends of the sling above and below the opposite shoulder, and the rollers around the thorax, including the fore-arm.

A strip of adhesive plaster carried over the acromion is suggested by Dr. Brinton (*Erichsen's Surgery*, p. 207) as calculated to assist in retaining the fragments in apposition. A mould might be made with softened paste-board, or strips of linen coated with

starch, to cover the deltoid muscle, and thus to furnish a medium of resistance to the upward pressure of the humerus, which would effectually prevent any displacement of the fracture by the means used to keep up the shoulder.

Malgaigne, who seems to give the preference to an ordinary sling with a roller-bandage to fix the limb against the chest, adds: "if, however, in certain cases it be found that the complete reduction can be better effected by carrying the elbow outwards, backwards, or in any other direction, such means of retention should be adopted as will most effectually accomplish the object." The treatment should be continued about one month.

*Fractures of the Coracoid Process.*—From the deep-seated position of this process and its protection by muscular masses, in addition to the mobility of the scapula, its fracture is exceedingly rare, and almost always attended with a very considerable degree of contusion. Although few of the systematic writers seem to appreciate the danger of such an accident, history teaches us that it not unfrequently proves fatal. Boyer, Malgaigne, South, Arnott and others, relate cases in which the patients succumbed under the influence of extensive suppurative inflammation beneath the pectoral muscles and in the axillary region, some in very few days—others after more protracted suffering.

The *diagnosis* of these fractures is not always easily made out. But, in addition to the local pain, we may expect to find the fragment drawn down by the coraco-brachialis and other muscles implanted into this process, unless it be still held up by its ligamentous connexions with the clavicle and acromion, in which case crepitation could be more easily produced than if the separation were considerable. Unless the tumefaction be great, the situation of the fragment may sometimes be distinctly felt by fixing the scapula against the body and carrying the elbow in different directions. We may in the same way sometimes detect crepitation.

*Treatment.*—By placing the fore-arm in a sling, with the elbow inclined forward, so as to relax the biceps, coraco-brachialis and pectoralis minor, we shall accomplish all that can be done by mechanical means. But the treatment should also be specially directed to the prevention of suppurative inflammation. Cold water dressings and evaporating lotions should be diligently applied for at least ten days, or until the danger has subsided.

Leeches may be sometimes advantageously applied. If suppuration takes place an early outlet should be made at the most dependent point.

It is doubted, by many, that ossific union ever takes place in this fracture. Yet, if the ligamentous attachments be unbroken, the displacement will not probably be great, and we see no good reason why a bony union may not occur. The degree of disability consequent upon this accident will depend upon the firmness of the adhesions the fragment may form.

*Fractures of the Neck of the Scapula.*—The written history of this accident offers a singular illustration of the defects of anatomical language, and of the evil of using terms whose meaning is liable to various interpretations. When *anatomists* use the expression *cervix-scapulae*, or *neck of the scapula*, they apply it to a line near the circumference of the glenoid cavity and just beyond the attachment of the capsular ligament. This line does not, therefore, include the coracoid process. But *surgical* writers apply these terms indifferently to the line just indicated and to another, which, commencing at the notch in the superior costa of the scapula, would follow the depression at the anterior termination of the spine, and, running around this narrow portion of the bone, would include the whole of the enlargement which supports the glenoid cavity and the root of the coracoid process. In short, there is here the same want of precision that we find with regard to the neck of the humerus. In both cases anatomists regard the line of junction of the articular surface, or epiphysis with the body of the bone, as *the neck*, while surgeons are in the habit of including within the neck a much larger portion of the bone. Hence the epithets *anatomical neck* and *surgical neck*, used by writers who do not wish to be misunderstood.

I am led to make these remarks, in consequence of an apparent discrepancy between authors of acknowledged ability and experience. Sir A. Cooper, in his admirable work upon Dislocations and Fractures, devotes a special and entire section to "Fractures of the Neck of the Scapula," and relates three cases in illustration of his views. But he sets out with the following declaration:—"When I speak of fracture of the *cervix scapulae*, I mean a fracture through the narrow part of the bone, immediately opposite the notch of the superior costa." There can be no mistake then as to his true meaning. Now let us refer to Prof. Erichsen, and we find only this short paragraph on the subject;

"Fracture of the neck of the scapula probably never occurs, and there can be little doubt that Sir A. Cooper and Mr. South are correct in stating that cases so described are in reality instances of fracture of the upper end of the humerus. There is, according to Mr. South, no preparation in any museum in London illustrating fracture of the neck of the scapula. Indeed, on looking at the great strength of this portion of the bone, and the way in which it is protected by the other parts about the shoulder, it is difficult to understand how it can be broken." Prof. Ericksen does not anywhere indicate what he means by "the neck," and would seem, from the above quotation, to have committed a singular error in relation to Sir A. Cooper's views. But Dr. Brinton, the American Editor of Prof. E.'s work, without remarking upon this error, adds: "A number of cases of fracture of the neck of the scapula have been reported; in all instances, however, the line of fracture passing behind the base of the coracoid process. (The Science and Art of Surgery, Am. Ed., p. 207-8.) It appears to me very evident that Prof. Ericksen has been misled by the Notes appended by Mr. South to the Translation of Chelius. (See the Am. Ed. of Chelius, vol. 1, p. 601, and p. 606.)

Now the question presents itself: is there ever any fracture of either the *anatomical* or the *surgical* neck of the scapula?

In reference to the occurrence of fractures of the *anatomical* neck of the scapula, I find that the celebrated Jean Louis Petit observes: "Le col de l'omoplate ne peut se casser que très difficilement . . . cependant je l'ai vu cassé près du bord de la cavité; on le réduisit facilement, mais on eut beaucoup de peine à le contenir, et le malade est demeuré estropié." (Traité des Mal. des os. Paris, 1758. Tom. 2, p. 136.)

"The neck of the scapula is not broken without great difficulty. . . . Yet I have seen it broken near the edge of the glenoid cavity: it was easily reduced, but very difficult to keep in place, and the patient remained crippled."

In Bell's Anatomy (Am. Ed., vol. 1, p. 78) is the following language: "This head, or glenoid cavity of the scapula, is planted upon a narrower part, which tends to a point, but is finished by this flat head; this narrower part is what is named the *Neck* of the *scapula*, which, no doubt, sometimes gives way and breaks." In a foot-note, he adds: "I have met with the accident in practice, and have preparations of the fractured bone, so that there

can be no doubt of this accident sometimes occurring, yet it is very rare."

Samuel Cooper says that "sometimes great pains and a crepitus are experienced on moving the shoulder-joint after an accident; and yet the spine, the neck of the scapula" (the surgical neck), "and all the above parts, are not broken. In this circumstance, it is to be suspected either that a small portion of the head of the os brachii, or a little piece of the *glenoid cavity* of the scapula, is broken off; which latter occurrence, I think, is not very uncommon." (Dict. of Pract. Surgery.)

Chelius treats of fractures of the neck of the shoulder blade, but I cannot determine whether he alludes to the anatomical or the surgical neck. Vidal evidently speaks of a fracture of the *anatomical* neck, when he tells us that if the neck of the scapula be broken the glenoidal fragment will be drawn down by the long head of the biceps. He refers to the action of none of the muscles implanted into the coracoid process. (Tr. de Pathol. Ext., Tom. 2, p. 224.) Fergusson teaches that the glenoid cavity may be separated from the body of the scapula, at either the surgical or the anatomical neck and says that he thinks he has seen an instance of the latter kind. (Op. cit., p. 212.) He even illustrates his position by a wood-cut, which is, however, evidently not copied from nature.

While it is very evident from these quotations that some practitioners not only believe in the *possibility* of a fracture of the anatomical neck of the scapula, but also think that they have *seen* cases of this accident, their language is not such as to remove all doubt as to their true meaning in those cases in which they refer to actual specimens examined after death. J. L. Petit thinks he treated a case of fracture near the glenoid cavity—but he made no post-mortem inspection, and may therefore have been mistaken. John Bell's language is too ambiguous to authorize us to conclude positively that his specimen was one of this kind. Samuel Cooper, Chelius, Vidal, and Fergusson, have neither of them referred to any specimen, but simply believe that this fracture has occurred. I do not recollect ever seeing a specimen of this kind, and know of no author who unequivocally describes any. We may therefore reasonably infer that if it does ever take place, it must be exceedingly rare.

Let us now advert to the evidence in regard to fractures of the

*surgical* neck of the scapula. We have already seen that Sir Astley Cooper not only admits its existence, but even adduces the history of three cases of the kind. We have likewise quoted Dr. Brinton on the subject. Prof. Pirrie, after defining the surgical neck, and referring to the doubts of some as to the possibility of its fracture, adds: "Its occurrence has now been proved by dissection. I have seen three examples of this fracture. One was in a woman upwards of forty-five years of age; another, in a man upwards of fifty; and a third, in a lad of sixteen." (Princ. and Pract. of Surgery, Am. Ed. p. 149.) Samuel Cooper admits its occurrence, in his Dictionary of Practical Surgery. It is somewhat remarkable that Malgaigne, in his elaborate work upon Fractures, makes no allusion whatever, to fractures of the neck of the scapula, either anatomical or surgical. Fractures of the surgical neck are distinctly described by Druitt, Fergusson, Prof. Miller of Edinburgh, and others. It is unnecessary to furnish any farther testimony to prove that this fracture may occur, and that it has been studied. But we cannot refrain from reproducing the graphic histories left us by such authority as Sir Astley Cooper.

"CASE CCXLIII.—Mrs. R. in February, 1834, was thrown from a gig by the wheel running upon a bank. She was stunned by the fall, and remained insensible some little time; she then found that her head, shoulder, hip, and ankle, on the right side, were much bruised, so much so that she was unable to move either of them, from pain and swelling; the chief bruise on the shoulder was at the upper and back part. Thinking that the stiffness of the shoulder, as well as of the hip and ankle, arose merely from the bruise, no surgeon saw her until ten days after the accident, when she found that notwithstanding the swelling had subsided, she was unable to move her arm. The surgeon, mistaking the case for dislocation, placed his knee in the axilla, and made violent extension; finding, however, that upon removing the knee, the shoulder again assumed its original flattened appearance, he said that there was a fracture somewhere, but could not say exactly at what part; he then placed a pad in the axilla, and put on a figure-of-8 bandage, confining the arm to the side by another bandage. Swelling and inflammation about the shoulder-joint followed the use of the extending force, to such an extent as to render the removal of the bandage immediately necessary. Leeches, cold lotions, and strict antiphlogistic regimen reduced this, and in a week or ten days the bandages were again applied, and continued for six weeks, being renewed several times during that period. At the end of this time all the bandages were removed, and the patient desired gradually to use the arm as much

as she was able ; she could not, however, use it in the slightest degree, and even the passive motion made use of, greatly increased her suffering, and produced several attacks of inflammation of the part. These were reduced as before, and she continued the passive motion, under the direction of her surgeon, (notwithstanding that it much increased her suffering) until July, when the pain which the slightest motion gave her had increased to such an extent that she could bear it no longer. In the commencement of August, at the request of her brother, she came to town for further advice, when the state of the case was as follows.

"The right shoulder was flattened, the arm dropped, the coracoid process of the affected side was on a plane nearly an inch lower than the opposite, the head of the bone and edge of the glenoid cavity might be felt in the axilla, and by placing the finger upon the under edge of that cavity, and raising it, the whole arm was reduced to its natural appearance, and at the same time a distinct crepitus was felt. There was some deformity at the top of the shoulder, however still remaining, from the clavicle having been fractured close to its acromial extremity, and from its having united without being reduced ; it was the acromial portion which in this case rode over the end of the sternal. A crepitus was also distinctly felt, by placing the fore and middle finger upon the coracoid process, and the thumb on the back part of the shoulder, and thus moving the glenoid cavity from side to side, marking the case clearly to be one of non-united fracture of the cervix of the scapula.

"A thick cushion was therefore placed in the axilla, and the shoulder being raised to its natural position, a bandage was passed under the arm and over the shoulder, being at the same time passed once or twice around the chest to prevent its slipping off the shoulder.

"The arm was confined to the side, and the elbow supported by a pasteboard sling. In this way the patient was made comparatively easy, the natural roundness of the shoulder restored, and she was enabled to turn and move in bed, which, before the shoulder was fixed, she was unable to do, from the great pain it occasioned.

"CASE CCXLIV.—In the year 1829, I was consulted by Mr. Alderman Partridge, of Colchester, respecting a case of this accident, which he described in the following words :

"Mr. P., of Colchester, met with an accident about five months since by a fall from his chaise. I was requested to meet Dr. Nunn, who had been in attendance for two or three days ; and it then appeared to have been a dislocation of the humerus into the axilla, and I could see no reason to doubt but that Dr. Nunn had reduced it ; but I must confess that the tumefaction and tension were so considerable, that it became a difficult matter to decide : however, both from what he himself stated at the time, as well as from Dr. Nunn's and my own personal observation. I gave it as my opinion that it was reduced, although that shoulder appeared rather lower

than the other. This I had observed in other cases ; but in this instance it struck me to be rather more than common, and led me to conclude (which I stated at the time,) that a considerable portion of the glenoid cavity had been fractured off. I saw him several times afterwards ; and although the swelling continued for several weeks, still it became more and more observable that some very serious injury had been done to the glenoid cavity ; and when I saw him at about a month or six weeks from the accident, I could, by placing my hand in the axilla, and pushing at the elbow, bring the head of the humerus up and rotate it in the glenoid cavity ; and still persisted in my former opinion. I was again requested to see him about a week since, when I found the head of the bone resting, where you will, I doubt not, find it ; and conveying to the feel a certain crepitus, which still leads me to suppose that the glenoid cavity has received the injury I have described, and how far the chances go for any benefit by an effort to replace it after such a lapse of time I must leave to you.'

"The degree of deformity produced by this accident depends upon the extent of laceration of a ligament which passes from the under part of the spine of the scapula to the glenoid cavity, and which is not generally described in anatomical books. If this be torn, the glenoid cavity and the head of the os humeri fall deeply into the axilla ; but the displacement is much less if this remain whole.

"CASE CCXLV.—A young lady was thrown from a gig, by the fall of the horse, in the Strand ; and being carried to her house, a surgeon in the neighborhood was sent for, who told her the shoulder was dislocated ; by extension all the appearances of dislocation were removed, and he bound up the arm. On the following morning he requested me to see the case, as the arm, he said, was again dislocated. On examination, I found the head of the bone in the axilla, and the shoulder so fallen and flattened, as to give to the accident many of the characters of dislocation ; however by elevating the shoulder, and by raising the arm at the elbow, and the head of the bone from the axilla, it was immediately replaced ; but when I gave up this support the limb instantly sunk again. I then rotated the elbow, and pressing the coracoid process of the scapula with my fingers, by grasping the top of the shoulder, directly felt a crepitus. Having satisfactorily ascertained the nature of the accident, I placed a thick cushion in the axilla, and drawing the shoulder into its natural position, secured it by the application of a clavicle bandage, and in seven weeks the part united without deformity."

The symptomatology deducible from the above cases, is very plain: the shoulder droops, and the deltoid is flattened in consequence of the falling of the head of the humerus which can be felt in the axilla ; the coracoid process is lower than that of the other



side; but the natural relation of the parts is readily restored by pushing up the humerus, and again as readily displaced by allowing the arm to hang down; crepitation may also be distinctly felt by imparting motion to the fragment, by means of the fingers applied to the coracoid process, while the body of the scapula is held firmly by the other hand resting upon it; or, it may be induced by simply pushing up the humerus and glenoid cavity to their proper position, and then rubbing the fragments together by varied movements. In the language of Sir Astley Cooper, "the diagnostic marks of this accident are three; first, the facility with which the parts are replaced; secondly, the immediate fall of the head of the bone into the axilla, when the extension (elevation?) is removed; and thirdly, the crepitus which is felt at the extremity of the coracoid process of the scapula, when the arm is rotated. The best method of discovering the crepitus is, for the surgeon's hand to be placed over the top of the shoulder, and the point of the fore-finger to be rested on the coracoid process; the arm being then rotated, the crepitus is directly perceived, because the coracoid process being attached to the glenoid cavity, and being broken off with it, although itself uninjured, the crepitus is communicated through the medium of that process." (Page 870.)

I will now proceed to give an account of two cases of this fracture which have come under my personal observation:

CASE I.—On the 7th of October, 1853, a stout negro man, about nineteen years of age, called Ambrose, and belonging to Mr. Avery, of Columbia county, Ga., was sent to me with a note from my friend Dr. H. R. Casey, who had seen the case. It seems that three weeks previously, while at work in the field, a limb fell from a tree upon the left shoulder of this man. The blow was very severe, and, upon recovering from the shock, the man found that he had entirely lost the use of his arm, but suffered excruciating pain in the shoulder, axilla, and even to the ends of his fingers. The Doctor saw him a few hours after the accident, and found him still suffering intensely and unable to move any portion of the limb; not even the fingers. No arterial pulsation whatever could be felt at the wrist, the limb was rather cool, but sensibility was not destroyed in it, for the patient would feel when pinched. There were no symptoms of concussion of the brain nor of any lesion about the head. The shoulder alone had been stricken,

and this was very much swollen. Opiates were freely administered to relieve the pain, and the limb was placed in a sling.

The following copy of a letter, written to Dr. C., will explain the condition in which I found the patient:

AUGUSTA, 7th October, 1858.

*Dear Doctor,*

I have carefully examined the very interesting case sent me by Mr. A., and think that the paralysis was induced by injury to the axillary nerves and vessels which were jammed against the ribs by the head of the humerus, when the blow was received. I think there is a fracture of the neck of the scapula still existing.

I will briefly enumerate the symptoms I have observed: evident depression of the head of the humerus below the acromion; the head of the humerus rotates under the finger continuously with the lower end of the bone, and without crepitation; the depression of the head of the humerus is reduced by pressing up the elbow; crepitation very audible, and easily felt by placing the left hand upon the shoulder, whilst with the right hand you seize the elbow and work it freely, so as to force the shoulder up and down. No crepitus can be induced by acting upon the different parts of the *body* of the scapula, nor upon the acromion, nor upon the clavicle. By placing your ear, with or without the stethoscope, upon the scapula, the crepitus is very loud. Now, as to the suspended circulation and paralysis, I find no pulsation in the arteries, not even as high as the axilla, although the artery can be felt with its accompanying nerve on the inside of the biceps. The limb is cold, but especially so, below the elbow. Circulation in the veins evident, but slow. The limb is insensible below the elbow, and partially so above. The ulnar nerve may be compressed behind the elbow without sensation.

The patient says that he suffered dreadfully at first, and that the whole limb down to the ends of his fingers was much swollen, as well as that side of the chest, for some time after the injury; and that loss of motion was immediately induced. From these facts, I think myself warranted in the inference above indicated, and also in the belief that the vessels have suffered so much from the contusion as to obliterate the axillary artery.

It is now three weeks since the accident—what is to be done? Suspend the elbow with a handkerchief sling, such as I advise in

fractures of the clavicle, so as to keep the fractured edges in contact, and to relieve the axillary nerves from compression. Give electric shocks daily to the limb, passing the fluid from the back of the neck down to the fingers. This stimulation of the nerves may possibly be useful. Let the man take exercise to brace the system.

Yours, in haste,

L. A. DUGAS.

Wishing to know the present state of the case, I addressed a note to Dr. Casey, requesting him to see Ambrose, and to furnish me the desired information. I make the subjoined extract from the Doctor's reply, dated 31st March, 1857:

"I examined Ambrose with Dr. Bailly to-day. We think that the coracoid process is not in its proper place, but below this and along with the glenoid cavity. The acromion is intact, and the head of the humerus can be readily felt rotating below. We thought we could detect a slight crepitus, but not very distinctly. The limb is very much atrophied—I should say not half as large as the other. The atrophy extends to the muscles on that side of the chest. The mammary region here is entirely shrunken, while it is very prominent on the other side. Paralysis still extends to the fingers. He still suffers pain occasionally."

*Remarks.*—I should here observe, that when I saw the patient, I could not feel the coracoid process with sufficient distinctness to act upon it as advised by Sir A. Cooper. Yet the whole chain of symptoms was sufficiently characteristic to leave no doubt as to the true nature of the case. The head of the humerus was depressed to such a degree, as to rest upon the axillary plexus, but could be easily forced up into its proper position; it rotated *continuously* with the shaft of the bone, and without crepitation; crepitation was easily felt by forcing the elbow up and down so as to bring the fragments against each other. Neither the clavicle, the acromion, nor any portion of the *body* of the scapula was broken. The seat of fracture could only be in the surgical neck of the scapula.

The lesion of the axillary artery and nerves here noted deserves especial attention, for I am not aware that it has been mentioned by any author in connection with this accident. It is true, that some of them allude to the disability sometimes experienced in the

use of the limb, and which may even lead to loss of motion in neglected cases; but, nowhere do I find any intimation of the sudden production of paralysis, nor of the obliteration of the artery so remarkable in this case, and so evidently caused by the immediate injury done to the nerves and blood-vessels of the axilla.

Baron Boyer, who is perhaps more full in the description of such accidents than any other writer, with the exception of Sir A. Cooper, observes: "But the most serious of all these fractures (fractures of the scapula), are those of the coracoid process and of the neck of the bone: these are difficult to keep in place, and their consolidation is frequently attended with considerable stiffness of the arm, with an impossibility to elevate the limb, with atrophy, and sometimes even with paralysis." (Translated from p. 166—Tom. 3—of *Tr. des Med. Chir.*, Paris, 1831.) Boyer's remarks here evidently refer to the effects of continued disuse, rather than to any immediate injury to the nerves. The same may be said with regard to the views of Sir A. Cooper.

CASE II.—In December last, (1856,) Mr. R. W. Daniel, of Jefferson county, in this State, brought to me a negro man between fifty and sixty years of age, who, in the month of March previous, while felling trees was stricken down by a limb. The blow was principally sustained by the right shoulder, and he immediately lost the use of his arm and fingers. The physician who saw him reports that no pulse could be felt at the wrist at his first visit. My examination of the case, nine months after the accident, revealed the following state of things:

The clavicle had been broken at about two and a half inches from its acromial extremity, but the fracture was united, the sternal fragment overlapping the other. The acromion process had also been broken at its junction with the spine of the scapula, and an uneven union had taken place. The connection between the acromion and the clavicle appeared to have sustained some injury as it was enlarged and uneven. The shoulder drooped so much as to resemble very much at first sight a dislocation downwards. The deltoid was flattened, and the head of the humerus could not be found in its proper place, unless forced up by acting upon the elbow, by which means it could be readily replaced, but would again immediately fall upon releasing the elbow, and permitting the limb to hang down. The coracoid process evidently followed the

upward and downward movements of the humerus. No crepitus could be detected by rotating the humerus when hanging down, but it became very audible when the elbow was forced up and then moved in different directions. The elbow could be placed against the chest while the fingers rested upon the sound shoulder, without any difficulty, so as to establish conclusively that there was no dislocation of the humerus, according to the principle I have established for some years back. (See *Southern Med. and Surg. J.* for 1856, p. 131.)

The patient still suffered almost continual pain along the arm down to the fingers. He represented his sufferings as sometimes excruciating. These were somewhat relieved by forcing up the head of the humerus. He was entirely unable to move any muscle from the shoulder down, and he said that his limb felt benumbed, especially from the elbow to his fingers. He could, however, feel when pinched at any point of the surface. No pulsation whatever could be felt in any of the arteries of the limb, and the temperature of the skin was lower than that of the other arm. The pectoralis major, the muscles of the scapula, those of the shoulder, and indeed of the whole limb were very much atrophied. The man's general health had suffered from long continued pain and want of accustomed active exercise.

The only prescription made in this case was, that the humerus should be well forced up and sustained in this position by means of a sling bandage carried beneath the elbow and well secured.

Dr. James Bell, who lives in the neighborhood, informs me in a letter, (dated 18th March, 1857,) that the patient has been using the sling since I advised it, that the shoulder appears to be a little fuller, but that he still has no use of his limb, and occasionally suffers extreme pain in the wrist. His fingers are dwindling away and becoming stiff.

*Remarks.*—It will be observed that, with the exception of the fractures of the clavicle and acromion, this case presents a striking analogy to the one just preceding. In both cases the injury resulted from the fall of a tree, in both instances the blow was followed immediately by paralysis and cessation of circulation in the arterial trunks, and in both the injury to the nerves and blood-vessels has persisted. Both have derived some relief by the support given to the limb, but they still suffer more or less. In

neither case was a retentive bandage applied soon enough to promise union of the fragments, and none has taken place. Both being ignorant and heedless negroes, have doubtless been more or less remiss, in proper attentions to the application of the bandage, and this may account in some measure for the persistence of pain. Would a timely application of suitable bandages have allowed the nerves and vessels to recover from the severe injury inflicted upon them? The question cannot be satisfactorily answered without additional facts and observations.

The deplorable condition of these men, who have not only lost the use of an arm, but are also subject to harrassing pains, which may continue indefinitely, would seem to demand at our hands some measure of relief. Unable to think of anything better, the propriety of amputation has presented itself to my mind as perhaps justifiable under the circumstances.

By removing the weight of the limb which is continually pressing upon and chafing the nerves, it is probable that the pains with which these patients are annoyed would cease. The usefulness of the limb being irrecoverably lost, the only objection to amputation, since it may be done without pain under the influence of anæsthesia, would be its danger to life. This danger would of course be greater in amputation at the shoulder joint, than if it were performed at the insertion of the deltoid muscle, and the latter would probably answer the indication. Amputations in the upper portion of the arm are so rarely fatal in this section of country that the patient might well take the risk for the relief, especially when we consider that the change from a life of laborious exercise to one of even painless inactivity is in itself not without danger. Under the influence of these considerations, I recently proposed amputation to Ambrose, who has now been suffering several years; but he objects to the experiment.

## ARTICLE XVIII.

*Vesico-Vaginal Fistula.*—*A Report read before the Medical Society of the State of Georgia, at their Annual Meeting, at Augusta, April 8th, 1857.* By P. M. KOLLOCK, M. D., Professor of Obstetrics and Diseases of Women and Children, in the Savannah Medical College.

[Concluded from the May No., page 181.]

Dr. Sims claims that he has originated:

1st. A method by which the vagina can be thoroughly explored, and the operation easily performed.

2nd. That he has introduced a new suture apparatus, which lies imbedded in the tissues for an indefinite period without danger of cutting its way out, as do silk ligatures.

3rd. That he has invented a self-retaining catheter, which can be worn with the greatest comfort by the patient during the whole course of treatment.

Every surgeon who has faithfully studied the method of cure which has been presented to the profession, by Dr. Sims, and the apparatus which he has invented for effecting it—and who has, at the same time, employed it—must be prepared to accord him the fullest meed of praise, as well as gratitude, for the industry and ingenuity which he has displayed, and the very convenient and efficient means which he has placed at the disposal of the Profession, for the management of a disease which has been hitherto found exceedingly incorrigible.

But, while we are prepared to admit that, in the hands of Dr. Sims, and guided by his skill and experience, success may be the rule, while failure the exception; justice to him and others, compels us to state with candour, that such has not been the result in the practice of other surgeons.

The sources of failure are to be found in the suture apparatus. The wires *will* cut themselves out in certain cases, however much attention may be bestowed, in their introduction at a sufficient distance from the edge of the raw surface, and sufficient depth into the sub-mucous tissue; the lips included between the clamps, *will* slough, however much judgment may be exercised in drawing them together, and irregularities on the vaginal surface, rigidity from cicatrices, and the situation of either a part, or whole of the fistu-

lous opening, may prevent the clamps from being evenly applied and with sufficient parallelism, to secure their regular and efficient action. In consequence of these occurrences, the patient has to be subjected to a greater or less number of repetitions of the operation; and, perhaps, other means have to be employed for the perfection of the cure. The following case (among others,) will prove the statement which has just been made:

March 16th, 1855. I was requested by Dr. Fickling to visit with him, Chloe, a negro girl belonging to Mr. Baynard, of this city (Savannah). I was informed that, in the month of December previous, she had been delivered of a child after a very severe labour, which lasted for two or three days; since which time, she had not been able to retain her urine. Without much difficulty, an urinary fistula was diagnosed, accompanied with great contraction and rigidity of the vaginal canal.

The death of Dr. Fickling a few days after this, placed the case entirely in my hands.

I had her removed from her owner's residence to my private infirmary, where a more thorough exploration of the case revealed the following condition of things:

The vaginal orifice contracted and rendered extremely rigid and unyielding by the formation of tough bands on each side; a fistulous orifice, three quarters of an inch in its longest (transverse) diameter, at the distance of one and a half or two inches from the external orifice of the urethra; one half inch above this, the finger came in contact with an obstruction, or bridge in the centre of the vagina, on each side of which a narrow passage extended upwards.

The finger, introduced into the rectum, detected what *seemed* to be the cervix and body of the uterus; but this could not be very distinctly made out.

From the evidence thus obtained, I inferred that there was an adhesion of the vaginal walls at the point of obstruction to the farther passage of the finger upwards, and that the canal was obliterated from that point to the os uteri above.

The condition of this poor creature was most deplorable. The urine passed from her involuntarily and without cessation—bathing the vagina, vulva, thighs and nates, and excoriating them by its acrid properties; causing intense suffering and inability to move about, and exhaling its intolerable stench, disgusting to herself and all in her vicinity.



To rescue a fellow creature from such a state of wretchedness, every generous and humane feeling was irresistibly appealed to; but the attempt seemed hopeless, and was so deemed by most of those who saw her. Encouraged, however, by the results in some very unpromising cases reported by Dr. Sims—where his operation was crowned with success after numerous repetitions—I determined not to be deterred by these very discouraging appearances, and accordingly undertook the treatment.

As the first step towards any operative procedure, it seemed to be imperative that the vagina should be dilated. My attention, therefore, was directed to this object. At this time, the vagina was so much contracted, that the smallest sized speculum could not be introduced, and the fistulous orifice could not be brought into sight.

The patient was so intolerant of pain, that no manipulation of any importance could be performed, without placing her completely under the influence of an anæsthetic agent. She was accordingly made to inhale a mixture of chloroform  $\frac{1}{4}$ , sulphuric ether  $\frac{3}{4}$ ; and the rigid bridges, on each side of the vagina, incised as freely as was deemed prudent. Dilatation was then attempted by the daily introduction of sponges and gum elastic bougies, and a catheter was retained in the bladder to conduct off the urine from the inflamed and excoriated vagina.

On the 17th of April, the patient being etherized, the fistulous orifice was brought into view by the introduction of Sims' speculum; an incision was made with a long handled scalpel, through the upper extremity of the blind pouch, into which the vagina had been converted by the adhesion of its walls antero-posteriorly. The incision was made transversely, and carefully extended on either side so as to divide the lateral bridges as much as possible. The finger was now passed up into the incision, and made use of for tearing up the adhesions above, and separating the walls as high as could be reached; but no os uteri could be detected by the end of the finger.

The fingers in the rectum and vagina at the same time, and afterwards, a finger in the vagina, and catheter in the bladder, proved that the passage which had thus been effected was between the bladder and rectum, and in the proper locality of the vagina. Lint was now inserted into this passage in order to prevent re-union. The operation was followed by considerable hemorrhage, which continued for some hours,

The process of dilatation was continued until May 10th, when I determined to make an attempt to close the fistulous opening.

The patient was placed on a table 3 feet by 4 feet, in a kneeling position, her body being supported, the head inclined downwards, the nates turned towards an open window, and the sunlight concentrated by a small looking glass on the vulva, so as to throw as much light as possible, into the vagina. The hands, trunk and lower extremities were secured by bandages to the table. As soon as she was profoundly influenced by the anæsthetic, Sims' speculum was introduced, which exhibited the fistula very much obscured by blood and urine, from the inflamed vagina and bladder. This was sponged out, and the mucous membrane raised by the tenaculum, and dissected off by means of a knife and curved scissors. The mucous membrane was removed by excoriation to the distance of an inch in front, and the posterior lip of the fistula was formed by a thick edge of the adherent tissue which had been divided in the first operation.

With great difficulty, owing to the contracted state of the vagina, the silk threads were passed by means of Sims' needle, and the silver wires lodged in their proper places; the leaden clamps were then applied and the edges of the fistula brought into apposition. Sims' catheter was introduced and the patient placed in bed. The bowels, which had been freely purged by castor oil on the day before the operation, were constipated, and patient kept quiet by the free exhibition of opium in two grain pills, her diet crackers and water. The catheter was removed once or twice a day and water, either warm or cold, (according to the weather,) liberally thrown upon the vulva and into vagina, by means of a syringe.

May 14th. Speculum introduced and parts examined. No derangement of the sutures; lips of fistula well approximated in centre, extremities doubtful.

May 17th. Examined: suture at left extremity of clamp torn through anterior lip; no adhesion at left extremity; middle closed.

May 21st. Sutures removed; adhesion of one-third at the centre; each extremity open, and urine passing through. These points were so much concealed by the lateral columns of the vagina that it was nearly impossible to freshen the edges, or to apply the clamps properly.

June 4th. Assisted by Drs. Bulloch, Mackall, and Mr. Godfrey a student of medicine, the patient (Chloe) was again placed

upon the operating table, secured in the same manner as before and etherized—the bowels having been emptied, on the day previous, by castor oil.

In consequence of the extreme narrowness of the vagina, the speculum which was found to be inconvenient, was dispensed with, and the dilatation was effected as well as possible by my own finger and those of my assistants.

It was ascertained that about one half of the original opening had been closed by the former operation, at the centre, leaving an orifice at each lateral extremity, through which air and urine bubbled. That, on the left side, was most difficult to reach, being concealed by a rigid cicatrised fold of mucous membrane, which lay parallel with the Ischio-pubic ramus. The paring of the edges of the two openings, although attended with much difficulty, was more easily performed than at the preceding operation.

The sutures (two in number), were passed through the edges of the left opening, extreme difficulty being encountered in disengaging the silk from the eye of the needle, after perforating the posterior lip; and on applying the clamps, the unyielding character of the tissues rendered it impossible to push up the anterior clamp as fairly and squarely as was desirable. The opening, however, appeared to be pretty effectually closed.

Two sutures were also passed in the same manner, but with less difficulty, through the opening on the right, and the clamps were placed very satisfactorily, so that the urine flowed entirely through the urethra. The patient was then remanded to bed with the catheter in the bladder, and the subsequent treatment was the same as after the first operation.

June 8th. Examined: every thing looking well. The clamp on the left side, which gave us so much trouble in the application, seemed to have retired more within the vagina, and approximated the posterior more nearly. The sutures were removed on the tenth day—it having been ascertained some days before, that those on the right side had cut through the anterior lip. I was grieved to find that no union had taken place on either side.

No farther operative procedure was undertaken for closing the fistula, until the 18th of October following. At that time it was found that the upper part of the vaginal canal had reclosed, and that the contraction of the lower portion had sensibly increased. With extreme difficulty a denuded surface was obtained, by means

of the knife, around each fistulous orifice, and leaden wires were passed by means of Sims' needle, the upper thickened fold of mucous membrane was drawn down as well as possible over the openings, and the ends of the wires twisted together.

On the 20th October the parts were examined, and to my chagrin I found the wires broken. They were, accordingly, removed.

October 25th. Patient being placed on the table and etherized, a silk thread was passed, doubled, through the lips of each opening—on the distal end was secured a perforated buck-shot, which was drawn up above the posterior lip; the proximal ends of the threads were then passed through three perforated buck-shot, traction made on the thread, and the lower end tied across a round piece of wood about the size of a pencil or pen-holder. In this manner the edges seemed to be pretty well approximated, and it was hoped that their adhesion would be effected.

On the third or fourth day after this last operation, it was ascertained that the sutures had cut their way out, and they were removed.

So much irritation of the bladder and vagina was the result of these operations, that the patient was kept in bed, and the catheter retained in her bladder. As soon as this subsided, she was allowed to rise and move about.

On examination some days after, it was observed that she had some incontinence, but no passage of urine through the vagina.

Dec. 1st. Her menses made their appearance for the first time since the accouchement, at which this grave accident occurred.

Dec. 21st. The vagina is moistened slightly by a thin fluid of urinous appearance, which flows from a minute point on each side of the vagina. These points were touched occasionally with Nit. Argent. for several weeks. At length a galvanic spark was kindled at each of these points, and in the course of some weeks, every appearance of fistulous opening was obliterated, and the patient was discharged as cured.

Here, then, is a case which confirms what I have asserted—that Sims' suture, ingenious and beautiful as it is, has not proved, in the hands of others, to be "all that could be desired." The reason of its failure was found in the indurated and inelastic condition of the altered vaginal tissues, which prevented the proper approximation of the clamps, and their "imbedding" themselves in the mucous coat, as is represented by Dr. Sims.

Nevertheless, (the case just detailed, and two others which will be mentioned, to the contrary notwithstanding,) until lately, I have regarded Dr. Sims' method of suturization, as the most perfect yet discovered, and the one most likely to succeed, and that it would prove triumphant in a very large majority of cases.

During the last winter, I received a small pamphlet entitled, "Remarks on Vesico-Vaginal Fistule, with an account of seven successful operations. By N. Bozeman, M.D., of Montgomery, Ala."

In this pamphlet, Dr. Bozeman describes "a new mode of suture"—original with himself—which he offers to the notice of the Profession, with a confidence founded on the results of the trials which he has made of it. He ascribes the discovery of this new suture to his repeated disappointments of the clamp suture of Dr. Sims, even in cases where, from their favorable nature, failure was not to be expected—and particularly in a case of double fistula, to which it proved so utterly inapplicable, that he was about to abandon the case in despair, when an accident, similar to that which revealed to Newton the Law of Gravitation, pointed out to him the road to success.

In the case of double fistula, to which he alludes, he attributes the failure of the clamps to the irritating effects of the urine on the edges of the fistula; and he says, "I became satisfied that I should never be able to cure the case, unless I could invent some contrivance by which either to close both openings at one operation, or to afford complete protection to the denuded edges of one during the healing process." "To contrive an apparatus that would fulfil one or the other of these indications, required, I supposed, much more inventive talent than I possessed; and after a little thought, I abandoned all hope of providing any thing that would answer the purpose. Sometime afterwards, however, while buttoning my vest, it occurred to me that a somewhat similar process might be applied to such cases as the one above cited, and after turning the matter over in my mind, I determined to put the idea in practice. Accordingly I made a contrivance on the button principle, and applied it in a case where the clamp suture had failed three times. The result was, as it has been in every trial since, as satisfactory as could be desired."

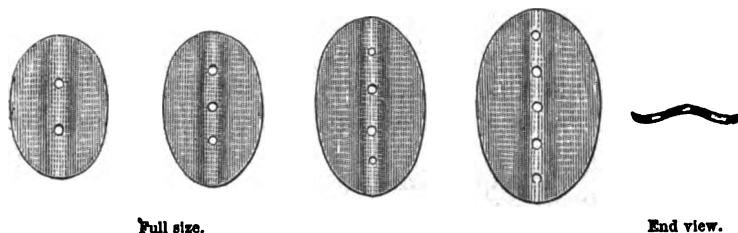
In accordance with the manner of its discovery, and also its mode of action, Dr. Bozeman has dubbed it the "Button Suture;" and remarks, that it is "only a modification of the twisted" suture.

"The essential parts of the apparatus consist of wire for the sutures, a metallic button, or plate, and perforated shot to retain the latter in its place. The wire should be made of pure silver, about the size usually marked No. 93, and properly annealed. A length of about 18 inches should be allowed for each suture.

"The button possesses several peculiarities. It may be made either of lead or silver. The former, hammered out to the thickness of  $\frac{1}{8}$ th of an inch, answers the purpose tolerably well. The latter can be made still thinner, and does better, on several accounts; it is lighter, less likely to yield under pressure, admits a higher polish, and allows the wires to be drawn through the holes without dragging."

The size and shape of the button will depend upon that of the fistula. The most common shape is oval. It must be concave on the under side, or that which lies in contact with the fistula; the edges must be slightly turned up, to avoid irritating the vaginal lining, and it must be perforated in the centre with holes proportioned in number to the number of wires which it is found necessary to introduce; and the holes must be of sufficient size to pass the wires double.

Fig. 1.



Dr. Bozeman recommends that the sutures should be placed about  $\frac{3}{8}$ ths of an inch apart. The size of the perforated shot, should be No. 3 bird shot.

The first steps of the operation do not differ materially from those of Dr. Sims. The position of the woman may be the same. Sims' speculum answers every purpose. And the freshening of the edges may be done in the same manner and with the same instruments. The wires are passed only through the mucous coat of the vagina, by means of silk threads. Dr. B. uses, for this purpose, a stout, straight, spear-pointed needle, and introduces it about half an inch from the freshened edge.

Fig. 2.

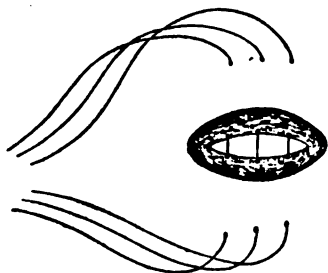
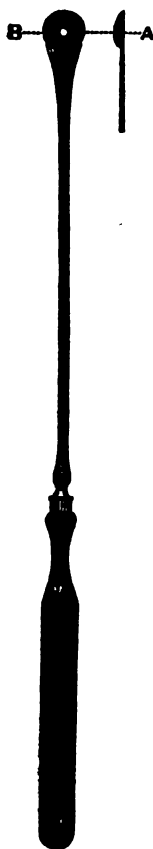


Figure 2 is a representation of the fistule of the most common shape, with its edges pared in the bevelled manner heretofore mentioned, and the silver wires drawn through.

Fig. 3.

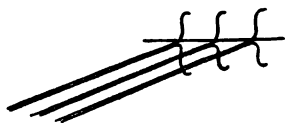


The wires being lodged in their places, the ends are brought together, and the edges of the opening approximated as accurately as possible. For this purpose a steel rod, (Fig. 3,) fixed in a handle, perforated and flattened and raised into a kind of knob on one side at its distal extremity, (called by Dr. B. the "suture adjuster,") is employed—the ends of the wires being passed through the hole at its extremity, and the instrument run down (the knob downwards) upon the edges of the opening at each point where the wires have been inserted.

The doubled wires are then passed through the holes in the button, and this last pushed down upon the approximated lips of the fistulous opening.

Fig. 4.

The appearance of the parts after all the sutures are adjusted is faithfully represented in Fig. 4.



A perforated shot is then run on each doubled wire until it comes in contact with the button, against which it is held with sufficient force by strong forceps, and there pinched with the forceps, so as to prevent their slipping back.

The wires are now cut off about a quarter of an inch from the shot, and the ends may be separated and bent down over the shot, which prevents their irritating the vaginal wall as it collapses, and aids in securing the shot.

Fig. 5.

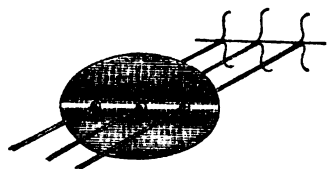


Fig. 6.

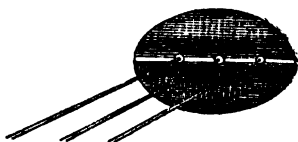


Fig. 7.

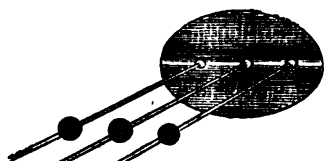


Fig. 8.



Figures 5, 6, 7 & 8, represent different stages of the application of the button and the shot upon the wire, as

taken from Dr. Bozeman's pamphlet.

Sims' catheter may now be introduced into the bladder, the patient put to bed, and the after treatment is the same as that recommended by Dr. Sims.

The sutures are not to be removed until the 10th or 12th day.

Dr. Bozeman's pamphlet gives the details of four cases of vesico-vaginal fistula treated by him with his button suture.

Case No. 1, was of three years standing; the clamp suture had failed after three trials. It was cured by one operation with the button suture.

Case No. 2. Double fistula, of seven months standing—cured by two operations with the button suture.

Case No. 3. Double fistula, of eighteen years standing—two successful operations with the button.

Case No. 4. Double fistula of nine years standing—several failures with clamp suture; cured by the button.

My own experience with the button suture may be illustrated by the detail of two cases; which will also show how much right I have to express an opinion concerning its merits, and to how much weight my testimony is entitled.

CASE 1st. Dolly—a negro belonging to Mr. Jacob Waldburg, of Savannah—was brought from St. Catherine's Island, her residence, to be treated for an incontinence of urine, which succeeded a very severe and protracted labour. It was ascertained that she had a fistulous communication between the bladder and vagina, about two inches from the vulva, its longest diameter one inch,



situated transversely to the vaginal axis. An attempt was made to close the opening by Sims' method; but although the case seemed to be well adapted to this treatment, and promised a favorable result, such did not occur—the sutures cut themselves out in a very few days, and, if any thing, she was left in a worse condition than before the operation. Her master, discouraged from any farther attempts to cure her, sent her back to his plantation, where she remained about eighteen months. At the end of that time, she was brought up to Savannah again and placed in my hands.

I found, on examining her, that the fistula was very much reduced in size, and that the longest diameter (about  $\frac{1}{2}$  inch) was situated parallel with the axis of the vagina. The mucous membrane was somewhat excoriated around the fistula.

On the 15th day of January, 1857, the bowels having been purged on the day previous with castor oil, the patient was secured on the operating table, in the kneeling position—etherized—Sims' speculum introduced into the vagina, which was lighted up by means of a looking-glass, as has already been described. My assistants were Drs. Wragg and Charlton, and Messrs. McFarlane and Johnson, students of the Savannah Medical College. A semi-lunar incision was made, with a small double-edged knife, curved on the flat, at the distance of  $\frac{1}{3}$ rd of an inch from the free edge of the opening, on each side, and the mucous membrane of the vagina dissected off. With a short, curved needle, armed with silver wire, (without the intervention of silk thread,) and fixed in Sims' grooved forceps, three points of suture were made—the needle being introduced  $\frac{1}{2}$  inch from the freshened edge, and passed only through the vaginal mucous coat. The ends of the wires were then brought together, the edges of the wound placed in apposition, the double wires passed through perforations in a button made of lead, and secured by the perforated shot. The wires were cut off about  $\frac{1}{4}$  inch from the shot, the ends separated and turned down over the shot.

Sims' catheter was introduced, and the patient was ordered opium, in 2 grain pills, to be repeated sufficiently often to allay pain, procure rest, and constipate the bowels. Diet—crackers and tea.

Jan. 16th. Complains of pain in the bowels and nausea, and towards evening vomited, probably the effects of opium, having

taken it pretty freely. Prescribed poultice to bowels and cold water to head—stop opium and substitute paregoric.

Jan. 17th and 18th. More comfortable; anorexia.

Jan. 22nd. Speculum introduced and parts examined—every thing in satisfactory condition. Unusual difficulty in retaining catheter in proper position—it has a tendency to turn; to prevent which, lint spread with cerate is packed around it, the catheter being passed through a hole in the lint, which also protects the vulva and perineum from the action of the urine as it flows from the end of the catheter. Catheter removed once or twice a day, and cleansed, and vulva and vagina well syringed with warm water.

Jan. 25th. Sutures removed. Perfect union of the edges throughout the whole length of the fistula; urine perfectly retained; every part healthy in appearance. The catheter was retained in the bladder five or six days longer.

Jan. 27th. Bowels moved by a warm water enema; and she was allowed to quit her bed on the 30th.

I have been very agreeably surprised at the very satisfactory result of this case; for I felt that my first attempt at manufacturing the button must be rude; and, moreover, after its application, several drops of urine were observed to pass through the middle perforation of the button.

CASE 2nd. Leah—negro—owned by a rice planter on Savannah river; sent to town to be treated by Dr. J. A. Wragg, the attending physician, for incontinence of urine, one of the sequelæ of a difficult labour.

Vesico-vaginal fistula was diagnosed at the distance of  $1\frac{1}{2}$  inches from the external orifice of the urethra—its longest diameter rather more than an inch, and situated transversely to the vaginal axis; hernial protrusion of vesical mucous coat, covered with red vascular granulations, which interfered very much with the operations which were performed, and was on one occasion removed with scissors. Her ability to retain her urine for a single moment was almost null, and she experienced the usual amount of excoriation and suffering.

An attempt was made to close the fistula, on Sims' plan, soon after her arrival in town, (during the spring of 1855,) by Dr. Wragg, assisted by several medical friends and myself. This operation resulted unfavorably, as well as a second and third.

The last operation was performed by myself, on the 4th day of July, 1856. The case seemed to be every way favorable for the operation, which was performed with great care and judgment in each case, and the failure was as unexpected as it was vexatious.

As very much depends in such cases, upon the treatment subsequent to the operation, this was followed up faithfully and perseveringly in every instance.

After the last operation, as the edges of the incision became covered with granulations, and the flow of urine had ceased, through the fistula, I was encouraged to hope that union had occurred, and accordingly the catheter and recumbent position were retained, and the constipation of the bowels not removed until the end of fifteen days, when it became evident that the operation had failed.

The patient was returned to her master's plantation for the recuperation of her general health, which had suffered somewhat by the confinement.

January 1st, 1857. Leah returned to town for the purpose of undergoing a fourth operation; and having succeeded so satisfactorily in the other case, I determined to give her the chance of the button suture of Dr. Bozeman.

The fistula was in very much the same condition as when I last operated on her.

The mucous membrane of the vagina was somewhat inflamed and excoriated, and there was calcareous deposits on the edges of the opening, and on the hair of the vulva and perineum. Accordingly, the excoriations were repeatedly touched with nit. arg. and a solution of sulph. zinc (3j. to Aq. Oj.) was thrown into the vagina twice a day; also, she was put upon the internal use of sulphuric acid (3j. to Aq. Oj., one wineglassful three times a day,) for the purpose of altering the character of the urine, and preventing farther deposition.

February 19th. The operation was performed,—the patient having been prepared as usual, by previous purging—being etherized and placed in the same position as in the previous operations. Denudation having been properly effected by a transverse elliptical incision with the knife curved on the flat, at a sufficient distance from the anterior and posterior lips of the fistula, and only through the vaginal mucous coat, five points of suture were estab-

lished, by the introduction of silver wire, with a small curved needle threaded directly with wire and not silk.

The edges having been carefully brought together, the ends of the wires were passed through the perforated holes of a silver plate, oval in shape, one inch in length, and five-eighths of an inch wide; the plate pressed down and secured by the shot upon the fistulous opening. The contact of the urine with the fistula was prevented by the introduction of the catheter. Paregorio was freely administered instead of opium.

Examination on the fourth day exhibited a satisfactory state of everything. The sutures were removed on the tenth day, and a perfect cure was witnessed. She was confined to bed, and the catheter retained for six days longer, when the suture points being nearly obliterated, the catheter was removed and she was allowed to leave her bed. I examined her for the last time, on March 21st, and was enabled to pronounce her perfectly cured.

I have thus detailed three cases occurring in my own practice, and treated by suture, on the two principles which may now be regarded as most worthy of confidence; and I think it will be conceded that I may, without very great presumption, claim the right to testify in regard to their respective merits. It is to be remarked that in the treatment of these three cases, nine operations by suture were performed—seven, by the clamp suture of Dr. Sims, and the other two, by the button suture of Dr. Bozeman.

The clamp suture failed in every instance to effect a cure; even in the two cases which seemed as favorable for its success as could be desired. The button suture succeeded perfectly in both cases, on the first trial. The preference must, therefore, be given without hesitation to the latter. And I fully endorse the statement of its discoverer, who claims for it the following advantages:

1st. It protects the edges of the fistulous opening against the irritation of the urine, of the vaginal discharges and the atmosphere.

2nd. It prevents the wires from cutting out.

3rd. It acts the part of a splint, in keeping the approximated edges in close contact, and at rest.

I consider this suture the greatest improvement that has ever been made in the treatment of this class of cases. The surgeon can now approach them with a confidence of success, before unknown. The profession and the public, owe to Dr. Bozeman a

debt of unspeakable gratitude. He has achieved an exploit, of which he has more reason to be proud, than if he were the hero of an Austerlitz or a Waterloo.

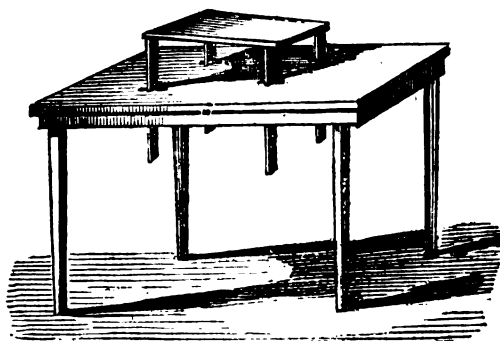
It is probable that other surgeons may make some slight alterations, in the employment of this method of operating, to suit their own convenience, and their own peculiar manner of manipulating. I think that the silk ligature, which is used both by Dr. Sims and Dr. Bozeman, for conveying the urine to its place, is an unnecessary complication. I have observed no disadvantage to result from threading the needle directly with the wire.

I prefer a needle smaller, and more curved at the point, than is recommended by either of these surgeons.

I have observed no disadvantage to result from placing the patient under an anæsthetic agent; it insures rest and freedom from suffering. The patient, Chloe, could not have been controlled without it.

The urine very frequently deposits calcareous matter on the edges of the fistulous opening, which has a tendency to prevent union. This may be prevented by medicating the urine, by the exhibition of sulphuric acid, for some days previous to the operation, as was suggested to me by my friend Dr. James B. Reid, who was one of my assistants in several of the operations.

I have had constructed a very convenient operating table, which has served a good purpose in the treatment of the cases which I have reported.



Its dimensions are 3 feet by 4,—30 inches high. On the table is erected a square frame  $2\frac{1}{2}$  by 2 feet, open in the middle, the side pieces 3 inches wide, and  $\frac{3}{4}$  of an inch thick;—these are supported by legs of the same shape and size as the

sides, which are attached to the frame by iron hinges, so that the frame can be placed at any angle with the legs. The legs are let into morticed holes in the top of the table, so that they can move up and down, and elevate or depress the frame or platform which supports the trunk of the patient's body, and suit it to her height. The extent of elevation is regulated by pegs inserted into holes in the legs of the table.

In this manner, the patient's trunk is supported in a kneeling position—a folded blanket having been thrown over the supporting frame-work, one end resting on the table, to protect the knees from the hard surface of the table. The arms and legs of the patient are secured by straps to iron rings screwed into the table, and her body by a saddle-girth to the supporting frame work; so, that she is incapable of moving in case the anæsthetic does not quiet her sufficiently, as sometimes occurs.

It is usual to allow the urine to dribble from the end of the catheter, and be absorbed by cloths placed under the nates. With all the care that can be exercised, inflammation and excoriation of the vulva and nates will occur, and the patient is kept in a very uncomfortable state.

I have no doubt that an apparatus may be so arranged for receiving the urine, made of some water-proof material, as to prevent this inconvenience.

I prevented it in a measure, in the last two cases reported, by passing the external end of the catheter through a hole in a piece of patent lint spread with cerate, and sufficiently long to cover the lower part of the vulva and perineum.

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*Coffee a Powerful Antidote.* By Dr. MAX LANGENSCHWARZ.

A very few persons, and I believe but a small number of medical men, know that Coffee is one of the most important antidotes to many deadly poisons, and to a great many ordinary drugs. This remarkable fact leads to serious considerations, many patients receiving the right remedies, but not being prohibited from taking Coffee, destroy the intended effects of their medicine, become worse, and lead the physician to change the right treatment into a false and perhaps unhappy one—while the simple knowledge of the above fact would have contributed to meliorate their state and to save them. But far more important is it to know that the fatal results

of many accidental, spontaneous or criminal empoisonments could be stopped almost instantly by administering that simple antidote, Coffee, while the loss of time in calling a physician, &c., is often the only cause of the loss of life.

The following is a list of the principal poisons which, out of a number of less dangerous, find their powerful antidote in the simple coffee, prepared in the manner I shall explain below :

1. Laudanum or opium.
2. Atropin and Belladonna.
3. Aconitine and Aconite.
4. Strychnine and Vomit nut, (*nux vomica*.)
5. Chelidonian, and the herb chelidonium majus.
6. Caustic lime, } and all caustics in general.
7. Potash. }
8. Phosphorus and all phosphoric preparations.
9. Solanin. (Principal basis contained in the germs and first shoots of potatoes, and very often self developed, if potatoes remain moistening in humid cellars.)
10. Aron. (*Caladium*, or *aron seguinum*.)
11. Brownstone. (*Manganum*.)
12. Verstrin and the white hellebore. (*Veratrum album*.)
13. Tansy oil, (or the infusion of tincture of *tanacetum vulgare*.) The tansy oil has been, and is still recommended by criminal persons, for the purpose of abortion, but it never produced abortion, but frequently kills mother and child together.
14. Borax.
15. Coloquinta.
16. Poisonment and suffocation by charcoal vapor, and therefore, of course, also.
17. Pyrocarbon, (the artificial or chemical development of the same poison.)
18. The spotted hemlock. (*Conium maculatum*.) The Concin contained in the seed is one of the most horrible poisons I am acquainted with.
19. Iodine.
20. Lycopodium.
21. Cherry-laurel, (*Laurocerasus*.)
22. Poisonous Sumac, (*Rhus Toxicodendron*.)
23. Valeriana.
24. Ignatia, (*Ignace beans*.)
25. Fly Mushroom, (*Agaricus Muscarius*, and all kinds of poisonous mushrooms.

All the effects of those substances are almost instantly destroyed by administering what we call "tincture of raw coffee," or even by a simple decoction of raw or green coffee, a preparation costing about nothing, and which, therefore, ought to be kept ready in every house and in the poorest family. The following is the very simple way to get that tincture: Take a quarter of a pound of green coffee (common Domingo the best,) and boil it with one quart of water till it is reduced to one pint; then put the whole (berries and liquid) in a quart bottle, add one pint of strong alcohol, and shake it from time to time a little. That's all. This tincture gets stronger from day to day, and will, if the bottle is well corked, keep for many years without changing. If to the pint of alcohol (about ten minutes before mixing it with the coffee decoction) you add a little spirits of camphor, say two table-spoonsful, you will not only double and triple the anti-poisonous quality of the tincture, but this preparation will then be an invaluable and certain antidote also to the following poisons:

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26. Garden Hemlock, or Dog's Parsley, (*Aethusa Cynapium*) particularly deadly to full-blooded persons, and producing (by confounding it with common Parsley) almost every year, fatal poisonings in all countries.
  27. Chalk.
  28. Barytea.
  29. Poisonous Lettuce (*Lactua Virosa*.)
  30. Capsicum, or Spanish pepper.
  31. Animal Coal.
  32. Coculus (*Mensaipernum Coeculus*.)
  33. *Drosera* (*Rotundifolia*.) or Sun Dew.
  34. Euphorbium, or the so-called Wolf's Milk.
  35. Black Hellebore.
  36. Hen Bane (*Hyoscyamus Niger*.)
  37. Hell Fig (*Latropha Curcas*.) called also the black Vomit Nut; one of the most terrible poisons.
  38. Wild Rosemary (*Ledum Pallustre*.)
  39. Moschus (Musk.)
  40. Nitric Acid.
  41. Muriatic Acid.
  42. Phosphoric Acid.
  43. Cocks-foot (*Ranunculus*) of every kind.
  44. Poisonous Snow Rose, (*Rhododendron chrysanthum*.)
  45. Garden Ruta *Graveolens*.)
  46. Sabina, (called also mother tea.)
  47. Ergot, (*secale cornutum*.)
  48. Silica.
  49. Bittersweet, (*Dulcamara*.)
  50. Common sponge. (Only the roasted one is employed as a remedy, but I saw very grave accidents to children, having taken pieces of the raw sponge into their mouths.)
  51. Mice-pepper, (*Staphysagria*.)
  52. Tobacco and the horrible Nicotine. (The patient can only be saved by our composed antidote of raw coffee, tincture and camphor.)
  53. Zinc preparations of every kind.

In a general toxicologie soon to be published, I shall give the antidotes to all other poisons known at present, but it may be useful to remark that, in about all cases of poisoning by metallic substances, (as for example arsenic, copper, verdigris, etc..) the best and the surest is to employ instantly a simple pap of common soap, that is, pieces of soap stamped with water to a kind of paste. A part of this paste diluted with a larger quantity of water, will serve for soap-clysters, which in such cases must be administered every five or ten minutes. If the jaw-bones are spasmodically closed, or the swallowing of the thick paste proves impossible, the same thin or diluted soap water must be administered through the mouth as well as it can.

The compound saving-tincture (of green coffee and camphor) is in the respective cases of poisoning, to be administered naturally and by clyster; the internal dose about ten to twelve drops in a teaspoonful of water every five minutes, and every fifteen minutes when the patient begins to recover. Larger and even very large doses may be given if the danger of life is imminent.

The ordinary cooked coffee (roasted, ground, and boiled or filtered) is in the most cases without any effect, and in some cases even dangerous. In a very few cases only, and particularly as an anti-



dote to opium, I found it highly useful. The principal substance acting so powerfully in the green tincture, is a kind of coffee-oil developed in the raw berries, but almost entirely destroyed by roasting the berries. This oil once withdrawn by roasting, the coffee only contains its exciting principles, which are (without the counter-balance of the oil) of little use. There are few cases where, the nervous system being entirely paralyzed through strong narcotic poisons, artificial excitement is necessary; and this may be the cause that I found large doses of common (roasted and boiled) coffee to act usefully against opium, tobacco, etc.

That coffee, exercising such an astonishing power over strong poisons, must be a poison itself cannot be doubted. If we take a large quantity of boiled coffee without suffering, it is only the habit of taking it from childhood which saves us. People in Turkey take without danger quantities of opium sufficient to kill a dozen of us, because they are in the habit of using it from childhood. In Tyrol, the general habit of hunters is, to take a good piece of pure white arsenic upon their tongue; to protect them (so they say) from getting thirsty.

But a very curious fact is the following:

The celebrated Professor Liebig tells us that the chemical basis of coffee (cofein) is absolutely the same as the basis of tea (thein.) Tea should then be an antidote against the most powerful poisons, the same as coffee. But not at all! Tea has no annihilating power whatever upon them, nor has it upon any poison! It is evident, therefore, that coffee must contain some particular chemical ingredients unknown to the great Chemist. Indeed, a long experience and many experiments have proved to me that coffee acts almost exclusively upon the blood, and has directly nothing to do with the nervous system; while tea, in contrary, acts almost exclusively upon the nerves, and has no direct influence at all upon the circulation. Coffee, entering into direct relation to the blood vessels, must, of course, be an agent upon poisonous material, having the same relation; and the fact is, that about all poisons to which it is an antidote, exercise their direct action equally upon the blood. Besides, (and without speaking here more about the oily substance in coffee, substance of which there is not to be found the slightest trace in the tea plant, the coffee has an extraordinary force of vivifying, while tea has only a blunting one.

I cannot believe, therefore, that *cofein* and *thein* are one and the same substance. Chemists mostly look at the form, but physicians look at the effect; and nothing but the effect can be decisive. If nature takes the liberty to retain some secrets without leave of certain professors, we must submit. Give coffee to a person poisoned by laudanum, and you will save the patient. Administer tea, and you loose your patient. Coffee is a truly invaluable remedy to re-establish circulation and life in drowned, frozen, suffocated and starving persons, while tea is of no use at all. Hundreds of experi-

ments show that tea, only acting upon the nerves, acts as a resistance, while coffee, removing and revifying the blood, causes reaction. Unfortunately, both resistance and re-action are commonly confounded with each other, even by many physicians, and this is a principal cause of their being unsuccessful in thousands of cases of poisoning.

If our dear fellow colleagues would study a little the antidotes in general, they would, in prescribing certain poisonous ingredients in lawful doses, at least interdict coffee. If, for example, a patient swallows at seven o'clock a spoonful of Iodine preparation, and then takes, ten minutes after, only one spoonful of good coffee, he will at half-past seven have no more Iodine in force in his system than he has whalebone force in his hairs. But certainly the matter I speak of must be coffee, and not that innocent and precious genuine coffee article of certain New York merchants, consisting one half in roasted carrots, another half in succory, and (excuse that new arithmetic) a third half in "smart merchant's tricks." I would prefer to swallow a certain kind of genuine New York tea colored with true *Schwein-further-green* and containing the most genuine arsenic. If Mr. Liebig will come and live in New York, I shall not quarrel with him at least about the moral identity of certain *Coffein* and *Thein*.

Meantime the public may, in case of fatal accidents, profit by the above remarks.—[*American Med. Gaz. and Jour. of Health*.

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*History of the art of Embalming from its origin to the present time.*  
(Translated from the *Moniteur des Hopitaux*, April 19th, 1855.)

We must go back to the earliest ages, in order to find the origin of preserving bodies, but for its history we must confine ourselves to those traditions which have been handed down to us in connection with the discovery of monuments which have escaped the destructive effects of time. Among the nations of Asia and Africa, where embalming appears to have been a general custom, those holding the first position were the Egyptians and the inhabitants of India. The Egyptians particularly, who left such numerous traces of ancient splendor, seemed to have wished to perpetuate themselves even in death, in strewing upon their soil mummies as indestructible as the superb monuments which concealed them.

Historians and antiquarians still conjecture on the motive which led these people to preserve the dead with so much care. Some attribute it to the belief that the soul, after escaping from the body, wandering about during 3000 years to re-enter it, and that therefore the destruction of the former would compel it to pass into the body of an animal. The more rational believe the practice to have arisen in connection with the principles of hygiene, one of the

branches of medicine that the Egyptians cultivated with so much success. For in these hot regions, only receiving fertility from the overflowing of the Nile, the decomposition of bodies deposited in the earth would soon destroy the purity of the air and spread among the population the seed of the most virulent disease. It is true that the places destined for burial were above the inundations of the river, but in these elevated places the putrefaction of bodies would have been even more fatal; for the winds which prevail in these countries in bringing putrid miasms from a distance would have transported also their disastrous effects. These considerations were too intimately connected with the interests of the public health to escape the enlightened spirit of those who had it under care; thus, Herodotus relates, that during a period of three thousand years Egypt was one of the healthiest countries in the world. Now, subject to the fatal yoke of Mahomedanism, it no longer enjoys this immunity, but it has become the hot-bed of the plague. The various modes of embalming in Egypt might be reduced to the following operations:

1st. Remove from the body all fatty matters and mucous portions by the prolonged action of soda.

2d. After having well washed the body, dry it in the air or in a stove.

3d. Preserve it by employing bitumen, balsams, resins, and salts.

4th. Surrounding it with numerous strips of cloth, smeared with gum or bitumen.

The aromatics employed by the rich, were myrrh, aloes, cannella, and cassia. For the inferior classes, cedar and the bitumen of Judea.

The duration of embalming varied from forty to seventy days, depending much on the drying of the bodies. When the operation was finished, they were enclosed in sarcophagi, and deposited in sepulchral chambers, inaccessible to moisture, the temperature being maintained at about 88 degrees, Fahr.

It is under these favorable conditions that a great number of mummies have been preserved through a long series of ages, and now supply us with sufficiently accurate knowledge of the art of embalming among the ancient Egyptians.

The Indian mummies, exhibited at the Garden of Plants, appear to have undergone an analogous preparation to those of Egypt. After embalming, the bodies were sewed up in the skins of goats, and deposited in catacombs.

In examining carefully the tissues of mummies, an analysis will detect nitrate or carbonate of potash, or sometimes sulphate and chloride of soda, or the iodides of lime and magnesia. During the infancy of the art, drying and aromatic substance were alone employed; later, saline matters entered among the ingredients. Ethiopians, inhabiting a country richer in gum than the rest of the globe, were accustomed to inclose their bodies in a molten mass of this

transparent matter, while the Scythians and Persians covered them with an envelope of wax.

Pliny speaks of the antiseptic properties of honey, and it is related that Alexander the Great, after death, was rubbed with honey before burial.

The Jewish custom was, after washing and perfuming the corpse, to surround the body in the coffin with myrrh, aloes, and other aromatics in large quantities. Saint John tells us that Nicodemus brought one hundred pounds of myrrh and aloes to embalm the body of Christ, the object being to prevent putrefaction, which property these aromatic substances possess in a high degree.

Modern nations following the example of the ancient Egyptians have long practiced evisceration in connection with the use of a number of solid and fluid substances to preserve bodies. Alcohol, essential oils, and compound linaments are most conspicuous; balsamic and aromatic powders with saline substances are also used.

In the middle ages the art of embalming consisted in mixing aromatic substances with salt, with which the bodies were filled. Henry I. of England, was thus embalmed in 1135, long incisions were made in various parts of the body, filled with this composition, then sewed up, the body being then enveloped in a beef's skin and enclosed in a coffin. The employment of salt for the preservation of the bodies of kings, is well known in history, the sellers of salt claiming as their right to assist at the royal funerals, and bear the bodies of the kings.

In 1658, Louis C. Bils, a noble of Holland, well skilled in anatomy, announced that he had found a way of preserving bodies from putrefaction without evisceration, so that the form and flexibility of the extremities being retained they could be used for dissection. The announcement of this discovery on the part of the first noble who had given up himself to the pursuit of anatomy made a great sensation. At the height of his renown the States of Brabant bought from him five embalmed subjects for 22,000 florins. Zipæus, professor of anatomy at the University of Louvain, to whom they were given, was appointed to receive the secret; but a few weeks had hardly elapsed when the bodies became putrid. Bils, pretending that such a result was owing to the jealousy of the professors who placed his preparations in a damp situation, in order to promote decomposition. Bils' treatment of bodies was with himself eminently successful; the secret was buried with him.

Ruysch, also a Dutch physician and anatomist of celebrity, tried to eclipse his adversary Bils. He succeeded in injecting pieces, which preserved their softness, flexibility and color. His collection so attracted general attention that it was visited by all the curious of Europe. It is said that Peter the Great, during a visit to this museum, was so attracted by the embalmed body of a little child which appeared to invite him with a smile, that he kissed it. Ruysch sold

his collection, at the entreaties of Peter the Great, for 30,000 florins. Although 79 years old, he immediately recommenced forming a collection, which he succeeded in doing in two years. In dying, in 1731, he also carried off with him the secret of his admirable injections.

Darconville was the first who discovered, in 1762, the preservative properties of corrosive sublimate, but we are indebted to the illustrious Chaussier for the practical use of this drug in preserving animal matter. Beclard, chief of the anatomical works of the faculty of medicine of Paris, applied the sublimate in embalming bodies. Charged with preserving the body of a young man who died with hectic fever, (the parents refusing to have the body opened,) after making numerous punctures and incisions in every portion of the body, he placed it in a solution of corrosive sublimate, in which it was kept for two months. When taken out, it was dried for a few days, and then enclosed in a glass case where it remained for a year without smell, or the slightest appearance of alteration. It was then given to the family. The skin was discolored greyish, and the features were somewhat changed from the thinning of the lips, cheeks, eyelids and ears.

Bugliaretti, an Italian physician, united arsenic with sublimate. He injected with this solution the primitive carotid artery, the right jugular vein, the external iliac on both sides, and by using a trocar he forced the fluid into the thorax and abdomen. The results obtained, appeared to be very similar to the preceding.

Dr. Tranchina, of Naples, acquired a great reputation in Italy for preserving bodies. His method consisted in an injection of a solution composed of 4 lbs. of arsenic in 10 lbs. of water. This mode of preservation, very dangerous for dissectors, did not serve the purpose of embalming, for the body became livid and atrophied in drying till only a skeleton remained, covered with skin from which the cuticle had peeled.

In 1822, M. Jannal, manufacturer of glue, discovered that a solution of salt and alum would prevent fermentation. With this mixture, in connection with a small quantity of arsenite of soda, he injected the body of a child, which was left on the tables of the Morgue for three months, and from which he attained a great reputation.

It is nearly fifty years since chloride of zinc was first used in England for preserving animal matters. Sucquet took out a patent for preserving pieces, by first injecting them with sulphate of soda, and then plunging them in a solution of chloride of zinc.

M. Granger had been previously acquainted with the antiseptic properties of the sulphate of zinc, and a young savant, M. Gratiolet, conservator of comparative anatomy at the Garden of Plants, had tried it for preserving anatomical pieces. After numerous experiments he abandoned this salt, which did not preserve sufficiently, as the tissues became discolored. The skin resembled parchment, and

the muscles diminished more than a third of their volume. Although injections of this salt tried at the anatomical rooms in Paris were unsuccessful, it is still used by anatomists in preserving subjects.

Dr. Roux, of Nîmes, teaches the following system: It is impossible to find an antiseptic, which will preserve all subjects. The following circumstances should be taken into consideration: 1st. The constitution of the subject. 2d. The cause of death. 3d. The temperature. Anatomists must have daily observed in the dissecting room that putrefaction is differently produced: in some subjects it shows itself with extreme rapidity, in others some days elapse, and a few might be kept for even weeks, without much decomposition. From this fact, he concludes that the choice of an antiseptic agent upon the character of the substance which it is intended to preserve—that is to say, upon each subject—should be chemically treated according to the constitution, cause of death, and influence of temperature. After long experience, this anatomist lays down the following rules:

A young animal is best preserved by using a sulphate; a sulphite for an animal at puberty; and a chloride for an adult; and lastly to prevent mould from appearing on the surface, pour over them either some essential oil, æther, or chloroform. There is no universal antiseptic agent. By following these rules, astonishing results will be obtained.—[*Charleston Med. Journal.*]

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*Strychnia: its Uses and Abuses.*

“This powerful alkali has figured very prominently of late before the public; and has, in certain instances, been handled, medically, in a manner somewhat remarkably. It is certainly not from any lack of caution as to its use by writers upon Pharmacy and Therapeutics that its powers have been at times very strikingly and dangerously manifested; but it is rather owing to its reckless employment, or to an over zeal in eliciting its effects, that accidents under medical management have happened. Those in the habit of prescribing it, if well instructed, know that it is second only to prussic acid in energy, when given in sufficient quantity to affect the system as a poison. A girl, 13 years old, died in about one hour from taking, by mistake, three-fourths of a grain divided into three pills; and it has ever been asserted that merely inhaling a little of it has proved fatal. Moreover, administered remedially, it sometimes has had an evidently cumulative action, and its effects are very likely to break out suddenly and uncontrollably, unless the greatest care is taken not to give too large doses, continuously. Yet there are instances where, from having long given it ineffectually, the practitioner has become impatient and added, very slightly it may be, to the usual dose, with the result of throwing his patient into strong convulsions. At other times the increase of the dose has even been more rash. Certainly this is an *abuse* of strychnia.

"We have lately heard of employing strychnia in some cases of insanity. We do not deny that there may be instances where it is demanded—as perhaps in certain concomitant paralytic states; but we are not cognizant of any special action that is predicated of this medicine likely to benefit the mental aberration. In a case of furious mania recently for a short time under our observation, we learned that *strychnia* had been administered on the outbreak of the affection. We are aware that it has been recommended in certain cases of maniacal aberration—but, as we suppose, in such as exhibited the moping melancholy form, and in hypochondriacal states. We fail to see the indication for its employment in violent, active mania, in young vigorous persons. If we mistake not, there have lately been reports of similar treatment in analogous cases; if our distrust be only *ignorance*, we beg to be enlightened upon the point. Unless we are thus informed, we put this down as another abuse of strychnia.

"It is needless to refer to the frightful and cold-blooded murders, the detailed circumstances of which have made communities tremble. In these cases, the abuse of strychnia has had its *uses*, in that it has given to the world the elaborate chemical reports and investigations required by the legal necessities of the case. These will stand as invaluable evidence, and will be always looked upon as mines of information. In connection with this part of our subject, we consider it an *abuse* of strychnia, as of *any* subtle and potent poison, to have it so easily procured. Druggists should not be allowed to vend this medicine, any more than arsenic, opium, prussic acid, &c., to all applicants indiscriminately. Might not much of this abuse be done away by refusing the sale to all who do not present a physician's prescription or order? We are aware that much has been written and said upon this point, and also that nothing, of consequence, has been done. Often these deadly articles are as heedlessly sold as the most simple remedies. The small pecuniary gain to the apothecary, levies a large debt of responsibility against him.

"The legitimate *uses* of strychnia are well known. A powerful excitant of the nervous system, without any specific action on the brain, it has been long acknowledged to be a very valuable remedy in certain paralytic conditions. Combined in minute doses with purgatives, it hastens and increases their action; and it has thus been advantageously employed in some cases of amenorrhœa, or of suspended menstruation. We can testify to good service done by it in this way. As a tonic, *brucia*, the other component alkaloid of nux vomica, has been found perhaps more useful than strychnia. The latter is often prescribed in dyspeptic states, such as are accompanied by pyrosis and gastrodynia. Testimony is strongly favorable to its curative effects in spasmodic asthma. Externally, its employment for amaurotic troubles has been extensive.

"To recur once more to the abuses of strychnia, or, which

amounts to the same thing, of the nux vomica, we cannot refrain from alluding to one which, in view of the strength and unmanageable nature of the agent, should be represented to the too credulous public in the way of a caution. There are those who by the necessity of their position and avocations, cannot have that knowledge of it, and familiarity with this and other giants of the *Materia Medica*, which fit them for advising or regulating their use. Still very many, in every community, are willing to take from such unskilled persons, compounds containing unknown amounts of strychnia, &c., &c. Thus we have *soidisant* or retired clergymen advertising that they will furnish a prescription for a preparation containing the active principle of St. Ignatius's bean, and the direction for using the same. All such tamperers with human strength and life are accountable to a higher tribunal than any earthly one, and those who aid and abet them must bear them company thither. It being quite sure that the adoption of these quack remedies by the people, only brings the honest physician more patients, we shall not be accused of covetousness in protesting against them. We do not aspire to coerce people, even by argument and the exposition of the bold and unwarrantable assumption that seeks to medicate—or rather to poison them—they are free agents, but certainly in no other affairs do they act so inadvisedly or expose precious interest so recklessly as in the care (as they understand it) of their health.

"The proper uses of strychnia, as of all medicinal agents, are only thoroughly known by the educated physician. Why does any one desire—or dare—having the manifest peril in view which its improper employment implies—to intrust its administration to the unfamiliar—the adventurer—or still worse, if possible, to their own judgment?

"And we commend to legislative consideration the dangers constantly attendant upon the unrestricted sale of medicinal articles, a fractional part of a grain of which sometimes takes life more quickly than the knife or the bullet. The facility of procuring such materials, arms the unprofessional murderer quite as surely, if less covertly, than it does a PALMER."—[*Boston Med. and Surg. Jour.*]

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#### *On Secondary Eruption following Vaccination.*

Mr. Ross lately read a paper on this subject before the Medical Society of London, in which he contends that the secondary eruption is a legitimate result of the true vaccine disease, and that a marked peculiarity of this as a constitutional disease is a tendency to periodicity.

After some general observations on the obscurity of the subject, the author said: "The propositions which I shall endeavor to establish are—1st. That there are various forms of eruptive disease consecutive to and caused by vaccination; 2d. That these eruptions appear at different periods, and are subordinate to the specific laws



of the vaccinous disease; 3d. That these eruptions are not prejudicial to the person vaccinated, but are rather evidences of the complete impregnation of the system, and of the protective efficacy of the act of vaccination. Notwithstanding the assertions by some authors that vaccination does not cause consecutive disease, the occurrence of such disease has been frequently noticed by medical practitioners; and even its varieties have been designated. Most works on diseases of the skin have some reference to such affections. There is not, however, any methodical analysis on record of such maladies, and they have been regarded rather as unimportant casualties than as legitimate sequences of vaccination. The desire, probably, thoroughly to establish vaccination in the confidence of the public has insensibly led to a depreciation of the after-symptoms, whereas it would have been more philosophical to examine the facts themselves, and to trace their actual connection, if any, with the original disease. There need be no fear that the great value of Jenner's immortal discovery will be impaired by an accurate acquaintance with all its phenomena. The whole number of secondary eruptions noticed by me during the period whilst I was conducting these inquiries was nineteen, and of these the specific character was recorded in eleven; the others were adverted to in general terms as 'secondary eruption;' but I believe that the greater number, or the whole of them, were of the vesicular type. Of these eleven, one was a transient exanthem, three were papular, and seven vesicular. In three other cases an eruption appeared at the end of about three weeks, but whether these cases were attributable to vaccination or not, the evidence is not decisive. The vesicular eruptions varied much in character, sometimes being as small as millet-seeds, and few in number; at other times as large as a crown-piece, and looking as if one vesicle was comprised within the circle of another. The size of the eruption was frequently that of the cow-pox at the eighth day, which, indeed it very much resembled, being a vesicle with a small central depression and circumferential redness. These eruptions were always preceded by fever, which was proportioned in degree to the number of vesicles thrown out. This fact proves the constitutional character of the affection. On this point I may remark that I have several times seen patients suffering from pyrexia and general *malaise* on the day when in other cases an eruption has usually appeared; but of these I have taken no account. The pyrexia, however, has convinced my mind, that the activity of the virus does not always cease with the drying-up of the pock. Even after the local action has disappeared, there are periodical changes going on in the constitution, which are, according to circumstances, of greater or less energy, and which are manifested by fever and secondary eruptions. The most important point connected with these secondary affections is their periodicity. In some of the cases the eruption appeared on the tenth day from the day of vaccination; in others on the fifteenth day; whilst, in

one case, the eruption was thrown out on the tenth day, it continued for a few days, then disappeared, and was observed again on the fifteenth day. In other instances the eruption appeared both on the fifteenth and twentieth days, or thereabouts. These cases further show the periodicity of the affection, and seem to reconcile the discrepancies between the cases that occurred on the tenth and fifteenth days respectively."

A discussion of some length took place, in which several fellows of the Society joined. The chief point discussed referred to the question whether the secondary eruption was the direct result of the vaccination or merely the consequence of the irritation produced in the system by the introduction of a foreign matter. It was generally considered that the secondary eruption was the result of simple irritation produced in the system by the vaccine virus, and that any other source of irritation might have been followed by the same results; that, in fact, the eruption was due to the development of the same latent disposition in the system to the eruptive disease which manifested itself. None of the speakers had been enabled from observation to connect the eruption with any periodicity in its appearance.

Mr. Ross, in reply, stated that the whole gist of his paper depended on this periodicity, of which he was certain, and without which his paper advanced nothing new. He thought the subject open to investigation, and upon that point was worthy of the serious consideration of the Society.—[*Lancet*.

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#### *Arsenic as a Caustic.*

In our preceding No. (p. 97.) we had occasion to comment on the danger of the external application of arsenic. The following remarks from a recent paper (*Med. Times and Gaz.*, Jan. 17th 1857,) by Prof. SIMPSON, strongly confirm the correctness of our caution.

"*Arsenic*.—The escharotic effects of arsenical preparations, when locally applied, were known to the ancients, and are alluded to by Dioscorides, Pliny, Celsus, and others. Arsenic is recommended in the form of sulphuret, as a topical remedy in the cure of malignant and recurrent ulcers by various old Greek and Roman physicians, as Galen, *Ætius*, Scribonius, Largus, etc. In the 15th and 16th centuries it was employed by Fuchs, Valescus, Fernel, and others in the elimination of cancerous parts. They applied it in the form of white arsenic or arsenious acid, diluted and mixed with soot and various vegetable and other powders. In later times it has been used under the same form by many distinguished surgeons in the extirpation of cancerous ulcers and structures. It has formed the basis, also, of most of the secret topical remedies or caustics for the cure of cancers that have at different times been in vogue; as for example, those of Müller, Martin, Von Campen, Chonet, Katzenber-

gen, Plunkett, Guy, etc. The form in which arsenic has chiefly been employed in later times as an escharotic is an arsenious acid; and the caustic powder or paste employed has usually consisted of a small percentage of this preparation, compounded and diluted with various other materials. The celebrated anti-cancerous caustics of Frè Côme, Rousselot, Justamond, Hellmund, Heyfelder, Anthony Dubois, etc., severally consists of white arsenic, mixed up with cinabar, dragon's blood, or the resin of the *Pterocarpus draco*, charcoal, etc., and made, before their application, into a paste or pomade with water, saliva, mucilage, or white of egg. Dupuytren's arsenical powder consisted of from one to five or six parts of arsenious acid, mixed with a hundred parts of calomel. The caustic of M. Manec, which is extensively employed in France at the present day, is formed of one part of arsenious acid, seven or eight parts of cinabar, and four parts of burnt sponge, formed into a paste with a few drops of water.

"One disadvantage connected with the topical use of arsenic as a caustic is the great amount and duration of local pain and irritation which it often produces. M. Lebert, who has had repeated occasion, as he tells us, to witness and watch the successful employment of Manec's arsenical paste by M. Manec himself, and who believes this caustic to be the best yet suggested, nevertheless states, that when used as an escharotic the immediate action of arsenic is 'one of the most painful means in surgery. Already,' says he, 'at the end of some hours violent pains commenced in and all around the part, tumefaction at first, and subsequently an erysipelatous-like inflammation speedily succeeded the pains, and it is only towards the end of five, six, or eight days that this general and extensive inflammation begins to diminish. During all this time,' he adds, 'the sufferings are sufficiently great to deprive some patients of all rest and sleep, and ten or fifteen days may elapse before these complications disappear.'—*Traité Pratique des Maladies Cancéreuses*, page 646.

"But a still graver objection exists to the use of arsenic as a caustic, viz., the danger of its absorption into the system, and of its subsequent action as a poison upon the patient, particularly when, as an escharotic, it is applied either too frequently or too freely to a surface of any considerable extent. Besides, there is singular uncertainty in the effects of arsenic when thus locally applied. A patient of Professor Roux's was fatally poisoned by the application, for a single night, of an arsenical paste containing four per cent. only of arsenic, to a small mammary ulcer only one and a half inch in diameter. Numerous instances have been observed in which vomiting, diarrhœa, colic, and other symptoms of arsenical poisoning have followed the external application of arsenical preparations. 'Its use,' says Dr. Pereira, 'is always attended with some danger.' Sometimes the patient has, like Roux's, died after its topical application as a caustic; and with all the symptoms that followed the internal administration of the poison. Medical literature has on record

a large number of such fatal cases. In speaking of the occasional danger attendant upon the local external use of arsenic as an escharotic in cancer, Sir Benjamin Brodie observes, 'An old medical practitioner, whom I knew in the early part of my professional life, informed me, that it had fallen to his lot to see many of Miss Plunkett's patients, and that after the application of her caustics, many of them died, from what seemed to be inflammation of the bowels.' — [*Lectures on Various Subjects in Pathology and Surgery*, page 385.] *Amer. Jour. of Med. Science.*

*Tubercular Phthisis.* By R. E. HAUGHTON, M. D., of Richmond, Indiana.

I now offer for your Journal the views which I have formed after a careful study and analysis of many cases of Tubercular Phthisis, under the following head: The primary pathological conditions of the system which finally terminate in scrofula and tuberculosis. These forms of disease are prevalent to a great and alarming extent in our country, and among our people, and the effort to obtain the primary and exact pathological conditions, and upon such a basis to erect a standard of treatment which will be successful in arresting their progress, and effecting a cure of those maladies, will be regarded as a benefaction to the race. Not that I hope to be able to do so, but to offer my mite to be cast into the great field of pathological inquiry, and to be rejected as error, or gathered up as important truths.

The first stage of phthisis is commonly said to be that in which the physical signs indicate a morbid deposit in the lung. But we must go back in our investigations to an earlier period, when there are undeniable evidences, and this long before the most experienced observer can detect the sounds which indicate an increasing solidity of structure in the lung. There is, prior to this, a peculiar antecedent state of the general system, which acts as a causative agent, originating the altered and pathological state of the blood, and which not only acts as a predisposing cause of tubercular deposits, but elaborates and prepares the material ere it enters and becomes part and parcel of the blood, from which tubercle is to be formed, and deposited in the lung. And here let me say to your readers, to this part of my subject I ask your careful attention, and your more careful and future study. When we go back and investigate the primary conditions of the system, we shall find not only the real and pathological causes of the disease, but in it a hopeful period of treatment, the very period in which we may arrest the most fatal of all the diseases which afflict fallen humanity. It has always been my belief that if we wait till a half organized cacoplastic deposit is made in the lung,

before we are called to treat it, we shall do as we always have done, most certainly fail; we are beginning at the wrong point and casting about us for a remedy, when perhaps organic changes have doomed the patient to premature death. These forms of disease are of two kinds, hereditary and acquired, or in other words accidental. I hold that in those different conditions we have a law of cell growth, or cell development, which is peculiar to the patient alone, whether his disease be acquired or whether it be hereditary. The law of cell growth is very different in the two, though at last tuberculosis is the result.

There is a faulty cell development established in the system, and this exists in the imperfect and incomplete elaboration of the chyle and lymph corpuscles, because the cell membrane fails to exert its transforming power upon the nutrient material, thus furnished in these fluids, and hence the vital operations here are imperfect; and the next result is elaboration of the blood cells, and hence imperfect blood. And in the blood, as in all other fluids, its own cell development is peculiar to itself, hence if the materials of nutrition are imperfectly transformed, we have imperfect blood, faulty in all its elements, and unfit to build up and sustain the vital actions which are so fully dependent upon healthy elements therein contained. The blood undergoes changes of its own, a process of growth: a process of development peculiar to itself, and in addition to receiving new material from the food, it gathers up the debris of the tissues, as the elements of their waste and disintegration. The new materials which are supplied to the blood in the chyle and lymph cells are immature products, and if their elaboration be faulty, the blood, though passing through a course of growth and development, cannot change their pre-existing condition; and hence, though this blood development is in progress, it cannot perfect that rich, highly developed material which is demanded by all the tissues of the body, and then we have waste and decay, because healthy elements are deficient. The oxygen of the air cannot replace those elements, and therefore we get an impaired vital energy, and here we discover impaired health without knowing what is about to be developed. But in case of hereditary forms of disease, there is inherited from the parent or parents, that peculiar cell growth which thus has become a law of the economy, and will sooner or later produce its pathological result, viz., tuberculosis. We do not mean here that scrofulous or tuberculous material is to pass from parent to child, nor that the child is born with tubercle already within its body, but that a disposition to form blood in such a manner as will produce tubercle, and this law exists in the charter of life which descends from parent to child. In the accidental or acquired forms of disease, there may be a primary derangement in the digestive system, and this may grow out of extraneous circumstances; but the primary trouble does not exist in the lungs, but it exists in the

nutrient system, and may have its origin in impure air, low damp places of abode; and all this teaches a means more efficient in cure than all the vaunted specifics which have ever been used as curative agents, viz., a return to exercise in the fresh air, which invigorates the whole economy, repairs the injuries of the digestive system, and then the use of nutritious, healthy elements of food.

Also in those cases of hereditary taint, the same causes may act as predisposing influences, and cell developement being regulated by the same law, or engrafted as it were upon the inheritance of life, thus becomes much more certainly and readily active, and the morbid deposit is as surely a product of this cell developement as the patient has sprung from a parent stock who has exhibited either the scrofulous or tuberculous cachexia. An objector may say, but the morbid deposit does not take place in all cases, nor is the diathesis present in many such cases, one generation to which this character of life, this law of cell developement has descended, escapes the dreadful fatality. But look again, the next generation, or at farthest, the third or fourth generation exhibits the surest evidence of inheritance; and these types of disease are presented to the observer, leaving no doubt in the mind of the careful investigator as to the original taint, and that the law of type of developement is as surely an organic law as any of the economy, though not always so evident as some others. Summing up then, we may say that the scrofulous diathesis has its primary existence in the faulty forms of cell developement, which give rise to diseased blood, and this disease of the blood mass is one affecting its growth and developement, and this becomes a part of an organic law in the transmission from parent to child; hence the hereditary succession, and it is perpetual as the family likeness. But what is tubercle? A deposit from the blood. This does not answer the question, and it is not easy to answer this question, as the opinions of many eminent observers, who have expressed different opinions in regard to its true character. Chemical analysis, however, gives us an approximate character, or knowledge of it, though it is not definitely settled, because its character changes according to age, condition, and the period of disease. Tubercle is not confined to man alone, but in all animals subject to confinement and deprived of fresh air and wholesome food, will exhibit tubercular deposits in various organs. If this be true, it furnishes us a singular fact, and one of much value in the hygienic treatment of those diseases, and would lead us to look more to their prevention than their cure after being fully developed.

I have stated that consumption and scrofula were induced primarily by imperfect cell growth, which elaborates the nutrient material, which is furnished and emptied into the blood, and hence the blood is changed; for how is a stream to be purer than its source? But now we come to take another step in making out a correct and reliable basis or pathology of these troubles. The

blood is sent to the lungs loaded with these impurities, which result from imperfect elaboration. For what purpose? For aëration; to come in contact with the oxygen of pure air, that it may be purified for the purposes of the general system. But what do we find? The blood which is sent to the lungs is venous blood, containing, in a healthy condition of the system, the waste products of the tissues, and now here is an increased amount of labor for the lungs, in the increased products of imperfect cell developement; viz., imperfect chyle and impure blood, and there is a fixed and definite chemical relation between the elements of the blood and the oxygen of the air, and only a certain amount of oxygen can displace so much of the impurities of the blood, hence a failure is the result in this important function, which added to the one described in the imperfect elaboration of the primary fluids, increases the difficulty, and these impurities again pass the round of the circulation. One of the elements contained in the blood is carbon, as an element of the oxygenation of the tissues. This takes the place of the oxygen which should pass the round of the systemic circulation, and hence we have imperfect chyle, imperfect blood, imperfect aëration of blood, and next we have failure of all the vital processes.

Here will begin more rapid wasting or emaciation, which is so marked a symptom of consumption. This imperfectly vitalized blood, thus circulating through all the organs, deposits elements in the glandular structures, which is soon seen in what is known as the scrofulous cachexia. Defective aëration of the blood then comes in to perpetuate the trouble already begun, and is one of the conditions, not first, as some *modern writers* have it, not singly and alone as is thus taught by the same writers, but one of the conditions, and only perpetuating a difficulty which begun in the cells which furnish the papulum of life, and which this process of aëration cannot remove. Taking the chain of events thus occurring, and we can erect a pathology and treatment which is more preventive than curative, and which is indicated to us in the causes thus brought to view. The doctrine of the inflammatory nature of tubercles, is now taught and believed by many, but it will not bear the test of post obit. examinations, even in all cases, especially of those who have died from other diseases, while tubercles were present, revealing the fact that the pulmonary structure was perfectly healthy, and free from inflammation contiguous to these deposits. Professor Gross, in his able work on Pathological Anatomy, treating of tubercle, says: "In a former edition of this work I expressed the opinion that tubercles are always of inflammatory origin, and a more thorough investigation of the subject has only tended to confirm this conclusion." We have no doubt but what tubercle may be the result of inflammatory diseases which have enfeebled the body, impaired the vital elements of the fluids of the body; but this will not account for all the cases which occur

without previous disease in any organs so far as observed, yet it is developed, and so insiduously that the patient is hardly aware of disease before he is a confirmed consumptive. Carpenter, in his late edition of *Physiology*, says: "that in persons who are of the scrofulous or strumous constitution, have an imperfectly elaborated fibrine, and contains an unusually large number of colorless corpuscles, while the red corpuscles are in unusually small proportion. We can understand then," says the same writer, "that such a deficiency in plasticity arises from defect in the nutritive processes, and thereby is made worse, and hence this great tendency to eacoplastic deposits, without inflammation." This is my own view of the nature of this deposit, but admit the influence of inflammation in increasing the tendency to rapid deposits after the cachexia once exists. My view is strengthened as regards cell transformation or cell growth, imperfectly elaborated fluids in chyle, lymph, and blood, from this view taken from Carpenter: "The most frequent of all the degenerations of lymph," he says, "being when the lymph is placed in any unfavorable condition from the first, for its development and result is a plastic, or caco-plastic material, which again after finding its way into the blood, is secreted and deposited by cell growth in the structure of the lungs, and we have an irritation as the result of deposit, and finally inflammation is set up locally around these deposits. Softening takes place easily, being unorganized products, and pus and a plastic material, which was contained in the crude tubercle as it came from the blood, or from the admixture of blood and lymph, originally very imperfectly elaborated.

Further evidence of the doctrine taught in this paper is this. The material unorganized as it is, which is provided for the healthy nutrition of all the different structures of the body, is converted under the controlling influence of vital action into living cells, and all those chemical and physical forces, by the operation of cell force is converted into vital power. But Carpenter says again, "It is inherent in the very nature of the living organism, that this instrumentality should exist but a limited time. The changes," he continues, "involved in the process of organization, have the effect of rendering the organic structure less and less instrumental in determining this metamorphoses of force, and thus a time arrives when the capacity of development is exhausted, and these forces no longer turn to account in vital activity, begin to exert a destroying, disintegrating power." Hence, then in the process of cell growth these chemical forces are known to exert their influence, and if the cell force is not active enough to resist the forces so operating, we have imperfect nutrition, imperfect fluids as the result of this cell force, and we need have no doubt as to the origin of the disease which grow out of such conditions. The cell force, which is operating, may be perverted, nay, is so, by such influences, and this perversion ends in the deposit in many cases of



these unorganized, cacoplastic deposits, which are frequently found in many of the tissues of the body. Treatment, principally hygienic.

If then these views, any of them, be correct in regard to the pathological conditions of tuberculoses, what are we to expect from the use of remedial agents? So far, the curative agents have proved abortive, and the mortality of consumption still increases. This mortality grows out of causes before hinted at, and are not single or alone. Hereditary taint, propagated by intermarriage with those who are thus strumous, and strumous diathesis, induced in the same way by such ties between blood relations, are causes not to be slightly overlooked. Again, the habits and customs of American society, are efficient causes, among which are fashionable life, the attendants of which, are poor ventilation, indolent, inactive habits, gross abuse of the digestive organs, spending many hours upon downy couches when day has called to active life, habits and customs in regard to dress, especially among the female portions of society, and a host of others which might be enumerated, all enervating and depressing the vital force which steadily diminishes in its resistance to the influence of such causes, and the lungs among the vital organs are prone to suffer. But when the disease is developed, what are the indications, presented to any medical man who is honest and desires to do his patient the most good? The first indication, is to remove as many of these causes as may be removed, and to instruct each and every sufferer in reference to the violated physical laws of their being, so that through ignorance, they shall not be guilty of violation of any known law. Second, to invigorate the general health. How shall it be done? Attention to all the laws of health, exercise in the open air, when there is ability to take it. These are among the most prominent remedial influences, and when regulated under judicious advice, will do more to arrest the progress of this fell destroyer than all the remedial agents ever taken in the stomach. Upon this point we have authority, Dr. Marshall Hall, Dr. Physick, and many others equally eminent, and the records of experience prove that this disease is thus arrested, and robust health has been attained. I might cite cases in my own observation, and from the medical records, but I will not. These influences change the action and the conditions of nutrition and respiration, the two functions which are principally affected or which present the primary lesions, nutrition leading first in the chain of events and respiration next. By way of illustration of these things, I will remark, that being connected by hereditary descent with a family who have suffered much from consumption, and having myself suffered, I have demonstrated, that in my own case the forgoing remarks on exercise in the fresh air and free expansion of the lungs are remedial. Three sons in as many years have fallen victims to this disease, hereditary transmission easily traceable,

though leaping over as it were one generation to fasten its remorseless grasp upon the next. I stood in the very same relation to that transmission that the brothers did who have fallen. I used the means which I propose, I did not impair the functions of the stomach with drugs; horse-back exercises, and counter-irritation, free expansion, and that in the open air, are the means to which I am indebted for vigorous health. But an objector may say you did not have this disease. Then some eminent men have made false diagnosis, and the symptoms which generally mark the disease betrayed us. Again the temperament of the individual exerts an influence. Those brothers were all of them of the temperament marked by fair skin, light hair, blue eyes, the very subjects which are the victims too commonly. I possess a very opposite temperament, and while they inherited the temperament also, I did not. Marriage relations then modified the strongly marked predisposing causes, and I escaped and they were victims. But enough on this point.—[*Nashville Jour. of Med. and Surgery.*

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*Absorption of Roots of Permanent Teeth.*

In the Austrian Journal of Practical Medicine, Dr. Heider gives the following account of the absorption of the roots of the permanent teeth.

The cause of the absorption of the roots of the deciduous teeth at the period of the second dentition, has been the subject of many observations and numerous hypotheses. All that we as yet know, with certainty, in respect to it, is, that there exists an intimate connection between the development of the permanent teeth, and the absorption of the roots of the deciduous teeth. In what, however, this connection actually consists, is not yet clearly explained. This much, however, is certain, that at the period of development of the permanent teeth, their enveloping sacculi become more vascular, and come in immediate contact with the roots of the deciduous teeth, and consequently play a very important part in the absorption of the latter—nay, in all probability, are the sole agents in effecting it. A renewed examination of the surface of the deciduous teeth, at which absorption takes place, shows that this is always on the side that is inclined towards the advancing tooth; and that when not merely the compensatory tooth, but its neighbor, comes in contact with the same deciduous tooth, two perfectly distinct surfaces of absorption, corresponding to the points of contact of the new teeth, are presented by the former, showing that both the advancing teeth in contact with it had contributed to the absorption of its root. Another fact places the correctness of this explanation of the means by which the absorption of the deciduous tooth is effected beyond doubt. When the permanent tooth is not developed, or its development takes place in a wrong situation, the corresponding decid-

nous tooth is not shed, but keeps its place in the jaw in after life. This is often found to be the case with respect to what are known popularly as the eye teeth. The deciduous teeth are consequently shed one after the other, just in the order in which, by the development of the corresponding permanent teeth, their roots are absorbed by the latter.

The foregoing facts have been known to dentists for some time, but much less familiar are they with the fact that the root of a sound permanent tooth may be absorbed in the same manner as the root of one of the deciduous teeth, by the abnormal development beneath it of another permanent tooth.

In my collection I have six permanent teeth, the roots of which have been in this manner entirely or partly absorbed. Five were extracted by myself, and the persons from whose mouths they were taken, remained under my observation; for one I am indebted to my esteemed colleague, N. Terzer. These teeth are divisible into two groups: the one, where the posterior root of the second inferior molar tooth was absorbed in consequence of the expansion of the crown of the adjoining wisdom tooth; the other, in which the root of the outer incisor was absorbed by the intruding crown of the so-called eye tooth. In all the surfaces at which absorption has taken place, present precisely the same appearance as those of the deciduous teeth, when these have been cast at the usual period. Especially is this observable in the second inferior molar teeth. In one we have the commencement of the absorption process, in a concave semicircular depression on that part of the root which was in contact with one of the projections on the obliquely situated crown of the adjoining wisdom tooth; in another case, one half, and in a third, the entire root is removed by the development beneath it of the *dens sapientia*. In all these cases, the extraction of the affected tooth was rendered necessary by the intense pain suffered by the patients, connected in one with inflammation of the periosteum of the root, and in the two others with exposure of the nerve.

Equally characteristic is the surface at which absorption had occurred in the incisors. In one there is an oval depression on the posterior surface of the root, near the neck; and in the other two the root is entirely removed, and one of them exhibits a cavity corresponding to the point of the encroaching eye tooth. The removal of the affected tooth, which in one case was already very loose, became necessary, in order to give room for the development of the approaching eye teeth.

These observations show, conclusively, that the process by which, at the period of the second dentition, the roots of the deciduous teeth are removed, is neither specific nor restricted to the first set of teeth but that it may be called into action in the case of the permanent teeth, and cause the removal of their roots also, and that it is dependent partly upon the structure of the dental tissue, and partly upon the increased vascularity of the outer portion of the sacculi of

the approaching teeth. The process has great similarity to that which occasions the absorption of the bones in consequence of the development of tumors in contact with them, and the two are probably identical.—[*American Jour. Medical Science.*

*Dr. Simpson's Morphia Suppositories.*

Mr. SPENCER WELLS has introduced into use at the Samaritan Hospital, a form of morphia suppository, used with great advantage by Dr. Simpson of Edinburgh. Mr. Wells has found it a most convenient form of suppository after operations on the vagina, rectum, uterus, or perineum of women, both in hospital and private practice, and especially so after operations on the male genito-urinary organs, as lithotrity, in cases of retention of urine, irritable structure, &c., and after division of fistula in ano, or the removal of piles or prolapsed mucous membrane of the rectum by the ecraseur. They act much more efficiently than the soap and opium in common pill use as a suppository, and are seldom or never expelled from the rectum after their introduction above the sphincter. They are made extremely well by Messrs. Duncan and Flockhart, of Edinburgh, and supplied by them at a very reasonable rate, of various strengths. But as they are likely to come into more general use, we append the formula on which they are prepared. The following is for the half grain suppository: Take of acetate of morphia, 6 grains; sugar of milk, 1 drachm; simple cerate, half a drachm, or as much as may be sufficient to make a proper consistence, and divide the mass into twelve suppositories. Then dip each suppository into the following mixture, to form a coating: Take of white wax 1 part, lard plaster 2 parts; melt together. The best way is to insert a needle into the apex of the suppository, dip it into the melted wax and lard, and immediately afterwards into cold water to harden it before it loses its shape. The shape is conical, like a pastille. It is easily introduced by the finger, or more nearly by the ordinary ivory suppository syringe. Mr. Coulson has also used these suppositories lately in several lithotrity cases, and has found them of the greatest benefit in allaying the irritation which often attends the passage of the fragments of calculi through the urethra.—[*Med. Times and Gaz.*

*Treatment of Erectile Tumors by Nitrate of Potash.*—M. Mangelot, having accidentally heard of the dispersion of a cutaneous congenital nævus by means of the application of nitrate of potash, resolved to try its efficacy in the case of his own infant; the nævus in this case, though small, increasing in size. The moistened finger was dipped in the powder, and the nævus gently rubbed with it. A small bulla, as observed in herpes labialis, was formed, and the tumor shrank away, so that one other application sufficed for its entire suspension. In four other cases the same results have followed the use of the nitrate of potash for nævi of the face, and in a fifth case, in which a nævus, four centimetres in diameter, existed on the shoulder, the same application removed it in two months.

[*Bulletin de Therap., and Vir. Med. Jour.*

## EDITORIAL AND MISCELLANEOUS.

**MEDICAL COLLEGE OF GEORGIA.**—At an adjourned meeting of the Board of Trustees, May 2nd, 1857, on motion of Dr. Ford, the following preamble and resolutions were unanimously passed :

The letter of Prof. G. M. Newton, resigning the Professorship of Anatomy being before the Board—

*Resolved*, That his resignation be accepted, under the assurance that any effort to induce his withdrawal of the same would be unavailing.

*Resolved*, That we here record our testimony to the faithfulness, zeal, and ability with which Prof. Newton has uniformly discharged the duties of his chair.

*Resolved*, That as a mark of personal regard, and of our high appreciation of his services, Prof. G. M. Newton be, and he is hereby appointed, Emeritus Professor of Anatomy, with the request that whilst exonerated from formal and stated duty, he will yet continue to lecture to the classes whenever his leisure and inclination may permit.

*Resolved*, That a copy of these resolutions be furnished Prof. Newton.

It was then, on motion, Resolved to proceed to fill the vacancy occasioned by the resignation of Prof. Newton :

Whereupon, Dr. Henry F. Campbell, was unanimously elected Professor of Anatomy.

On motion of Dr. Garvin, it was

*Resolved*, That the Professorship of Surgical Comparative and Microscopic Anatomy, heretofore held by Prof. Campbell be, and it is hereby abolished ; and that the title of the Professorship of Anatomy be changed to that of "Anatomy, Special and Comparative."

The Board then adjourned.

L. A. DUGAS, Secretary pro tem..

**PROFESSOR NEWTON.**—In giving place to the above kind expressions of the Board of Trustees, it can scarcely be expected that we will refrain from recording our own personal tribute to one, with whom for fifteen years, we have been a co-worker in the same field, and whose place in the Faculty we are now called to occupy. Sustaining towards him for many years, the near relation of Prosector and Demonstrator, we have had ample opportunity of knowing and appreciating his merit, as the perfect Anatomist—the urbane Teacher—the erudite Lecturer,—may he be as happy in retirement, as he has been useful in public. Difficult, we are fully aware, will it be for us to fill his place, but among our qualifications for the task, we do highly value the advantage, of having had ever before us, such a model in the Art, as Professor George M. Newton.

AMERICAN MEDICAL ASSOCIATION.—Our present number comes forth, without the minutes of the last meeting of this body. We have the promise of advance sheets, properly revised and corrected, but they will not arrive in time for our present issue, and we, therefore, defer any extended notice of the meeting, until these promised papers come to hand.—But there are certain things connected with the sojourn of the delegates at Nashville, which require neither paper-record nor revision, because they are indited upon the hearts and memories of all, in characters which can not be effaced, for such impressions are ever genuine; we refer to the brotherly kindness, the open-armed reception, and the genial hospitality of the Profession and Citizens of Nashville. Long may the association live to enjoy these pleasing recollections, among the graver ones, of such good cheer, such gratulation and interchange of kind feeling; and, when in the course of time they again appoint Nashville as their place of meeting, “may we be there to see,” and mingle in an anniversary celebration of the “good time” enjoyed in May, 1857.

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*On the Constitutional Treatment of Female Diseases.* By EDWARD RIGBY, M.D., etc., etc., Fellow of the Royal College of Physicians; Senior Physician to the General Lying-in-Hospital; Examiner in Midwifery at the University of London. Philadelphia: Blanchard & Lea. 1857. 12mo. pp. 256. (For sale by T. Richards & Son.)

The above is the title of a compendious, but sufficiently comprehensive treatise, on Female Diseases and their treatment; the subjects discussed, and the high character of its author, will secure for it the favorable consideration of the profession.

*Lectures on the Principles and Methods of Medical Observation and Research for the use of advanced Students and junior Practitioners.* By THOMAS LAYCOCK, M.D., F.R.S.E., F.R.C.P., Professor of the Practice of Medicine, and of Clinical Medicine in the University of Edinburgh, etc., etc. Philadelphia: Blanchard & Lea. 1857. 12mo. pp. 209. (For sale by T. Richards & Son.)

This useful little work, just issued from the press of Blanchard & Lea, consists of a series of lectures upon subjects, most important to the student and to the young practitioner. We consider such works not only important for the objects which they profess to accomplish, viz., to assist in correct observation and research, but their perusal and study more than any other class of reading perhaps, add to the power of generalization, that quality of mind which is so necessary to the Physician, and which, above all others, is thought to fortify and dignify its possessor. We commend the book to all; it is of convenient size, and in our humble opinion should be the pocket companion of every earnest student of medicine, till all its principles have been well conned, and thoroughly assumed as the very habit of his medical reflections.

*Treatment of Hooping-Cough by Enemata of Assafoetida.*—M. Ancelon, after passing in review, in the *Annales de la Flandre*, other modes of treating hooping-cough, on which occasion he greatly underrates the value of Belladonna, among the narcotics, indicates his decided preference for assafoetida given per anum. He declares it to be a reliable and an heroic remedy, in the second and third periods of the disease. Little can be expected from it in the first period. Much of its efficacy will depend on the dose and mode of administration. To infants eighteen months to two years old, three injections should be directed, each of them containing, in the smallest possible quantity of vehicle, fifteen grains of assafoetida and two drops of Sydenham's Liquid Laudanum. The first of these is to be administered in the evening; the second on the following morning; and the third in the evening, from twelve to fifteen hours after the second enema. M. Ancelon believes that in the second period the disease can be at once and entirely arrested. The third period presents greater difficulties and requires longer persistence in the use of the remedy, which must be continued twelve to fifteen days consecutively, while we associate with it as adjuvant, frictions on the skin with dry flannel or that which has imbibed oil of turpentine. M. Ancelon directs attention to the fact of which he has satisfied himself, that neither opium nor assafoetida, when given separately, produced any decided effect. Having had, as he believed, a certain remedy at hand, he was not disposed to make trials of sulphuric acid or of alum.

[Assafoetida has long been a familiar remedy in this country, in hooping-cough, at least as far as the teachings and writings of Dr. Chapman extended. With him this medicine was a favorite in this disease, and especially in combination with one of the alkalies; but although no stranger to its use as an enema, he did not so formally and emphatically recommend it in this way as is done by M. Ancelon.

Some salutary hints are furnished by this writer in the impromptu treatment of two infants in violent paroxysms of hooping-cough. The first was six months old, and when visited it was in a room heated to an extreme degree, and a prey to an epileptiform fit of coughing. Snatching it up instinctively in his arms, M. Ancelon took it to the window, which he opened; the season, that of winter, was remarkable for its coldness, and he exposed the little being to the air of a temperature of sixteen degrees below freezing-point. A deep inspiration and some easy coughing soon indicated a cessation of the fit. On the second occasion, the same good result was obtained by dashing cold water on the face of the little sufferer. These, the author judiciously adds, are extreme palliatives, which give time for recourse to regular treatment.]—*North American Med. Chir. Review.*

*Varicose Veins treated by Needles and Subcutaneous Section.*—Those students who follow the practice of Mr. Erichsen, at University College Hospital, must have seen him treat varicose veins, we may say, scores of times, by passing pins under the veins, and then applying a figure of 8 suture over them, generally in three places. This produces obliteration of the vein, and some days later the vein is divided subcutaneously, and in three or four days the cure is complete. This was repeated on last Wednesday, on a young woman with this condition of the veins of the left leg. At King's college Hospital, a few days back, we saw a case treated by Mr. Henry Lee in the same manner. He passed the pins under the veins on the 7th inst.; on the 10th he divided the veins subcutaneously; on the

11th he removed the pins; and on the 17th the patient was out, well. The subdivision of the veins after obliteration is a process for which the profession is solely indebted to Mr. Lee as the first to recommend it, and the advantages of such a proceeding cannot but strike the most superficial observer. Mr. Erichsen's practice in these cases differs from Mr. Lee's in that he removes the pins altogether when he divides the vein between them. We do not recollect any single instance, in the large number which we have seen treated, of any bad effects following this plan of treatment. The great secret in the success is to avoid puncturing the vein, and this is effected by lifting it up, and passing the pin well under it.—[*Lancet*.

*Treatment of Nævus*.—(JOHN COLVAN, in *Dublin Medical Press*.) I read lately a discussion in the Medical Press concerning various modes of treating nævi of different parts; I beg to say that a plan adopted and used at the county infirmary here, several years ago, has proved so successful, and is attended with so little trouble, as to supersede either excision, ligature, or indeed almost any other plan. The plan I alluded to is, to touch the surface of the nævus with a pencil of the kali pur. c. calce, which generally causes a slight effusion of dark grumous blood; the part is then covered with some pieces of dry lint previously ready, and if necessary, gentle pressure applied for a short time; this, however, is seldom necessary. In a few days, the part touched sloughs off, and it is again gently touched in the same way, until all the unnatural part is removed, when the ulcer is healed by a little simple ointment. This mode is equally efficacious in the case of solitary nævus, or when they are gregarious, as sometimes happens. There was a child in the infirmary lately, with a nævus occupying the lower lip, and spreading to the gum; I treated it as stated, and it left nearly quite well in a fortnight or so.—[*Nashville Jour. of Med.*

*Phytolacca Decandra in Granular Conjunctivæ*.—Dr. C. S. Fenner, of Memphis, Tenn., highly extols (*N. A. Medico-Chirurg. Rev.*, Jan. 1857) the efficacy of the phytolacca in preventing relapses in inflammation of granular lids:—

"Regarding," he says, "these exacerbations, accompanied with circumscribed orbital pain, soreness of the periosteum and scalp, as of rheumatic origin, about two years ago I was induced to give a trial to the phytolacca decandra or poke, from its well known efficacy in relieving rheumatic affections, and the result has far exceeded my most sanguine expectations. With the aid of this remedy, I have been enabled to effectually cure cases of granular conjunctivæ, that, without it, would have resisted all my efforts; indeed, with me it has proved almost a specific for the exacerbations attending this complaint. Patients fully under the influence of the phytolacca, often expose themselves and take a severe cold without affecting the eyes in the least. I make use of the root, and prescribe it either in the form of a very strong decoction, or tincture; the former I prefer, as less liable to nauseate or act on the bowels. I direct a half peck of the root, cut in small pieces, to be put into a kettle, to which is added four quarts of water, to be boiled down to one quart and strained. Of this a wineglassful may be taken every two or three hours. Some patients require more than others. The dose should be sufficient to produce a fulness of the temples and head a few minutes after it is taken, and patients soon learn to know the quantity required to produce this effect. Besides the fulness of the head, it causes



flushing of the face, a general glow and perspiration over the entire surface of the body, often fulness of the stomach, and occasionally nausea. After having been used four or five days, it usually acts on the bowels, when an opiate should be administered as occasion may require, and the quantity of the decoction diminished for a time, to be increased, however, on every unfavorable change of the weather, or the slightest symptom of a relapse. I have not yet seen a severe recurrence of acute inflammation in this disease, where the patient was kept fully under the influence of the phytolacca. If there is ulceration of the cornea, or much opacity, I usually prescribe a pill composed of one grain of calomel and the fourth of a grain of opium, to be taken every night. I know of no remedy so efficacious in promoting absorption of lymph deposited in the texture of the cornea as mercury; either in the form of calomel or blue mass, or, if these remedies are found to act on the salivary glands, I use the corrosive chloride, combined with the compound syrup of sarsaparilla. The latter form of mercury rarely salivates; it may be continued for months, and is particularly adapted to strumous cases attended with severe photophobia. If the system has been much reduced, and is in an anæmic condition, the preparations of iron will be of service.

*Amputation at the Hip-joint.*—Dr. GRO. C. BLACKMAN records a case of osteo-cephaloma of the femur, involving two-thirds of the shaft of the bone, in which he performed amputation at the hip-joint. At the date of the report, fifty-four weeks after the operation, there were two or three fistulous openings, probably communicating with the cotyloid cavity; but no appearance, as yet of a return of the disease.—*Western Lancet*.

*Ovariectomy.*—Dr. NELSON WINTON records (*Buffalo Med. Journal*, Dec. 1856 a case of ovarian tumor, successfully removed by extensive abdominal section, with recovery of the patient.

Another case, also successful, is recorded (*Peninsular Jour. of Medicine*, Oct. 1856) by Dr. EDWARD BATWELL, of Detroit.

Dr. FRIES reported to the Cincinnati Medical Society Nov. 10, 1856,) a case of ovarian tumour in which he had made the small incision through the abdominal parietes, tapped and then withdrew the sac. The woman was rapidly convalescing.—[*Western Lancet*.

*The Distinction between External and Internal Piles.*—It is a common mistake with students to confound *external* with *extruded* piles, and to call them *internal* which are out of sight, and those *external* which are visible. We need not say that this is an utterly false nomenclature. External piles are those which form without (external to) the circumferential margin of the sphincter, and are consequently always covered with skin; internal ones are those which are within the sphincter, (not above it,) and are covered by mucous membrane. External piles consequently are always dry and cuticular, internal ones moist and slimy. The external have a light uniform bluish tinge, varying according to the density of the skin over them; internal ones are bright and florid, or from all the shades of florid to those of livid and purple, according to the intensity of their congestion. External piles almost never bleed; internal ones almost always do so. External piles are dilated hæmorrhoidal veins; internal ones, as we shall presently see, are of a very different nature. External piles may be cut away with impunity, while to tie them would risk phlebitis and purulent

absorption. Internal piles may be tied with safety, while to excise them is to risk fearful, and, it may be, fatal hemorrhage. It is most important to understand clearly that the difference is one of kind and not of mere position.—[*London Hospital Notes*.]

*Glycerine and Borax in Cracked Tongue.*—Dr. Brinton has under his care an inveterate cracked tongue, which (like that of the late Charles Matthews) had baffled all attempts at alleviation for many years. It could not be referred to any syphilitic poison, and rendered eating, and especially speaking, very painful. Dr. Brinton made use of a favorite remedy of his in such cases, viz., borax dissolved in a lotion of glycerine (Price's Patent Candle Company's) and water (two scruples, one ounce, and four ounces, respectively). It at once gave marked relief; and after a few days, during which it was the only remedial agent, the improvement seemed increased by iodide of potassium and bark, taken internally. The patient has now considered himself well, and discontinued the lotion for some weeks, and the cracks are only visible as depressions in the mucous membrane.—[*Lancet*.]

*The Operation of Ovariectomy.*—Dr. E. P. Bennett, of Danbury, Conn., (Am. Jour. Med. Sciences) has the following exceedingly judicious remarks on this subject:—"In regard to this operation, I would suggest a few remarks to those who may hereafter venture on it. In the first place, let the new beginner never venture on a doubtful case; but select, if possible, one in which there is a degree of constitutional vigor, not old, or reduced by frequentappings. If possible, always operate before your patient is tapped at all, for two reasons. 1st. Tapping is apt to be followed by adhesions, more or less extensive, which of course increases the danger of subsequent inflammation. 2nd. The fluid being usually albuminous, the patient is reduced in strength in direct proportion to the number ofappings, and is therefore less able to bear the shock of an operation of such severity. It is generally easy to determine, by the progress of the case, whether it is an encysted or abdominal dropsy; but even if you cannot be certain, you lose nothing by cutting carefully into the abdomen. If you find a sac, well and good, go on; if not, why you can let out the water, and close up the wound. Operate early in the disease as possible. Evacuate the bowels freely the day previous, then keep them closed by opium, or some of its preparations, for five or six days. If the patient menstruates, operate two or three days after the menses cease. Enjoin strict regimen and quiet. Keep the room of uniform temperature. Draw off urine for the first five or six days. Use sufficient anodyne to allay all pain, and use as little chloroform as possible in the operation."

*On Exploration by Commotion.*—M. Cruveilhier observes that, in all cases of jaundice, as in all other diseases in which he suspects the liver to be affected, he is in the habit of exploring this organ by "commotion." For this purpose, the patient is placed on his seat, and the right side of the thorax is percussed from above downwards, the patient being desired to express himself when aware of unusual sensation or pain. It is very rare in recent icterus, and especially in febrile icterus, for the patient not to announce a marked sensibility as soon as the percussion excites a shaking of the liver. By this means too, an abscess of the liver, the consequence of a fall from a high place, has been diagnosed. M. Cruveilhier has also

applied this mode of exploration to the kidney, spleen, heart, and even the uterus. For the brain, it may be put into force by suddenly pulling at a handkerchief that is held closely between the teeth. In this way it has been advantageously used in many cases of cerebral disease.—[*Archives Générales*, and *Virginia Med. Journal*.]

*Nux Vomica in the Treatment of Sick Headache*.—Dr. J. B. McCaw (*Virginia Medical Journal*), gives some interesting facts in regard to the successful use of extract of *nux vomica*, and the *ignatia amara*, in those distressing ailments, sick headache. He began with a minimum dose, which was increased to one-fourth of a grain every night. In all the cases in which he employed it the effect was gratifying. The effect of these remedies should be closely watched.—[*Med. and Surg. Reporter*.]

*Digitalis in certain Affections of the Bowels*.—Dr. Ware stated that he had found this remedy of great benefit in the following case: The patient was a woman who suffered from dyspepsia, and had become somewhat reduced in strength by child-bearing. She had an affection of the bowels, which consisted in excruciating pain, coming on in paroxysms, together with diarrhoea and vomiting. The pulse was also extremely frequent, varying from 120 to 140. She bore opium badly. Dr. Ware, thinking the quickness of the circulation might keep up the irritability of the system, ordered digitalis, and this remedy was continued until the pulse was reduced to 54 beats in the minute, where it was kept by the remedy for a considerable time, and the patient recovered.

*Habitual Constipation*.—Dr. Haughton says: "In obstinate cases of this kind you will find the following a very capital pill: half a drachm of extract of henbane, one scruple of extract of colocynth, and three grains of extract of *nux vomica*, made into twelve pills, one to be taken night and morning."

*Alum as a Remedy in Croup*.—A correspondent of the *New Hampshire Journal of Medicine* states that for three years he has used alum in croup, and in all that time has not seen a fatal case which was treated with it from the beginning. He usually gives about ten grains, once in ten minutes, until vomiting is induced, using at the same time tartar emetic or the hive syrup freely—the latter subduing the inflammation, while alum has more of a repulsive action.

*Ligature of the External Iliac for Aneurism of Femoral Artery*.—This operation has recently been successfully performed by Dr. MERCIER, of New Orleans.—[*New Orleans Med. and Surg. Jour*.]

**ERRATA**.—The following errors occurred in the May No. in the article on *Vesico-Vaginal Fistula*, by Dr. P. M. Kollock, which the reader will please correct:

|              |                     |     |               |      |                     |
|--------------|---------------------|-----|---------------|------|---------------------|
| On page 269, | 11th line from top, | for | "cause,"      | read | <i>curae</i> .      |
| " "          | 31st "              | " " | "cunningest," | read | <i>cunning'st</i> . |
| " "          | 271, 18th "         | " " | "pond,"       | read | <i>fond</i> .       |
| " "          | 273, 18th "         | " " | "finally,"    | read | <i>firmly</i> .     |
| " "          | 274, 7th "          | " " | "1856,"       | read | 1856.               |
| " "          | 275, 18th "         | " " | "potoah,"     | read | <i>potash</i> .     |
| " "          | " "                 | " " | "Roerhuysen," | read | <i>Rooshuysen</i> . |
| " "          | 279, 2nd "          | " " | "range,"      | read | <i>verge</i> .      |
| " "          | " "                 | " " | "known,"      | read | <i>known</i> .      |
| " "          | 280 5th "           | " " | "assistant,"  | read | <i>assistant</i> .  |

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## ORIGINAL AND ECLECTIC.

### ARTICLE XIX.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

LETTER NO. 18.

MONTGOMERY, ALA., March 18th, 1857.

*Messrs. Editors,*—The nature of the non-cognizable causes of disease, and their modes of operation in and upon the animal economy, are involved in so much obscurity, as to render our knowledge upon the subject little less than a system of hypothetical speculation. The discussion of these, I would willingly avoid; yet, as all diseases seem to be made up of a series, alternately of cause and effect, which are, in a great measure, inseparable, one from the other, it becomes in consequence a difficult matter to investigate their true and essential pathological character, without examining at the same time their etiology. Indeed, so closely are these links of cause and effect connected in the chain of morbid actions, which follow the operation of the first cause, that it is often difficult, and sometimes impossible to determine where one begins and the other terminates; what actions come within the range of the etiological, and what the pathological character of the disease; or rather, what actions are referable to the operation of the *first cause*, and what to those which may be regarded as *secondary*. Hence, in inquiring into the pathology of these diseases, (I mean typhus, typhoid, and other diseases of the zymotic class,)

I shall be compelled to examine at some length into the nature of their causes and the mode of their operation, however obscure and difficult of comprehension they may be. In doing so, however, I do not expect, or even hope to be able to clear up any of the difficulties, or remove the obscurity in which the subject is involved, but merely to give expression to such views as I believe to be the most reasonable, because most conformable to their nature and mode of operation, as we are best able to understand them, from observing their effects upon the animal system. By the non-cognizable causes, I mean particularly those of *animal origin*, whether solid, liquid, or æriform, which, when taken into the circulation in whatsoever manner, act as *blood poisons*, giving rise to contagious, infectious, and some forms of epidemic diseases. Now, in order to produce the diseases to which these causes respectively give rise, (for it must be received as an axiom that every disease must have its peculiar and specific cause,) it is not sufficient that the blood should serve merely as the receptacle, and act as the vehicle for conveying the poison to those parts of the system for which it may have a special elective affinity; but it is *essential* that the blood itself should become contaminated, undergoing changes in its vital or chemical quality or properties, and furnishing a nidus and a pabulum for the regeneration or reproduction of the poison. To express the action or process by which these changes in the condition or constitution of the blood are effected, which becomes sooner or later manifest by the signs of excitement or depression, and a corresponding *increase* or diminution of vascular action, giving evidence of its *progress*, and the actual invasion of the disease, the term "*Zymosis*" has been used. This term, is at least appropriate, inasmuch as the process is *analogous* to a "*ferment*," and is not the less expressive, whether the action of these poisons upon the blood be, by a chemical or a vital process. A striking analogy is found in the fact, that the *process* having once been *completed*, *can not be renewed*; and the blood having been once subjected to the zymotic action of any *one* of these poisons, has its susceptibility to their impression in a great measure destroyed, becoming, as a general rule, incapable of having it the second time excited by the *same* poison. This fact, and the immunity which one attack of any of the zymotic diseases secures against their recurrence, furnishes conclusive evidence to my mind of the existence of a *separate* and *distinct* cause for each disease of this class. The separate, distinct

and suigeneric character of all these diseases is, at the same time, as conclusively shown in the pathognomonic signs, or diagnostic symptoms of each, whether they result from the *direct* operation of the *first* cause, or belong to the regular concatenation of morbid actions which make up the disease.

I have been led to these remarks from the fact, that the points involved remain open and unsettled questions, many contending still for the *unity*, or rather the *identity* of certain diseases and their causes, such for instance as bilious and yellow fevers, or of typhus and typhoid fevers, which they maintain are essentially the same disease, differing only in degree and the intensity of the causes which produce them. Such, I must confess, was at one time the inclination of my own opinions, but a more intimate acquaintance and careful study of their character, have satisfied me that such views were erroneous. I have even gone further and entertained for awhile, at least, the belief that some of these diseases possessed the character of a *duality*, that is, that they were made up of *two distinct* diseases blended into one, as for instance "*intermittent typhoid fever*" and yellow fever. Such were my views, particularly with regard to the yellow fever which appeared in Montgomery, in 1853, from which opinions I have found it somewhat a difficult matter to recede, in the face of the facts which existed at the time, (*en passant*, I am not the first and only one who has had to "*crav-fish it*" in their views concerning these diseases,) which in short were these: Yellow fever had never been known or recognized previous to that time in the region of Montgomery, except such cases as were occasionally carried there from Mobile, Pensacola, or New-Orleans, notwithstanding it had been considered a *hot-bed* for the most malignant forms of malarial fevers, and other diseases, not excepting cholera: nor were the causes of sickness apparently more rife, or even as much so as in former times, and there existed but few cases, comparatively, of malarious diseases. There were, however, prevailing, and had been for a length of time, *two distinct epidemic diseases*, one being *jaundice*, and the other typhoid fever, a coalescence of which two diseases, (and why not?) if it did not give us "*typhus icterodes*," it would give us at least an *icterus typhoides*, furnishing most of the prominent and characteristic features of yellow fever, and my belief was, that the prevailing disease was a *hybrid*, and not genuine "*Yellow Jack*," between which and yellow fever a much closer relation existed,

than between a "*chestnut horse* and a *horse chestnut*." These views received support from the fact, that the disease was characterised by an extraordinary predominance of jaundice symptoms, which were often the *first*, and, in many instances, the *only* symptoms manifested—the disease *preserving* the character of a pure, simple, uncomplicated case of jaundice. That such was the character of the disease as it prevailed elsewhere, I infer from some circumstances which came under my own observation, as well as from general report:

Two men from Pensacola, via Mobile, arrived in Montgomery on the 28th of August, both having been taken sick the day previous, on the boat. One of these cases presented clearly the most prominent characteristic symptoms of yellow fever, (a case which I shall notice hereafter, as it is my design to give cases illustrative of the principles and views which I advocate,) while the other was prominently marked by the characteristic symptoms of simple jaundice without a single symptom, apart from existing and surrounding *circumstances*, which would justify the belief that it was anything more; or, that it had any relation with yellow fever. And, if we are permitted to rely upon newspaper testimony, (?) there prevailed about that time, in Loudon, Tenn., and the surrounding neighborhood, (a place by-the-by, which has not found its way into the gazetteers, or upon the maps as I can perceive, though it is certainly of sufficient importance to have done so, if it can support a newspaper and *get up* an epidemic yellow fever, an honor and a distinction which formerly the large seaport cities only could aspire to,) an *epidemic jaundice*, as the report states, "which carried off many of the inhabitants, and which the physicians would have pronounced yellow fever, *but for the absence of fever*, many of the cases being attended with the *characteristic black vomit*."

There may be found in "Bell and Stokes," which I have not now before me, under the head of *epidemic jaundice*, the description of a disease which once prevailed as an epidemic in London, and described as "gastro-duodenitis," which if not yellow fever, at least bears a very striking resemblance to the disease which prevailed in Montgomery, in 1853, under that name. But further: some years ago I proposed to the Medical Society of Montgomery, as a subject of interest, an inquiry into the causes and the nature of jaundice, which I had observed, more than once, to pre-

vail in Montgomery in an epidemic form, and apparently as an idiopathic disease; but, being before *yellow fever times*, the subject was not deemed of sufficient importance, and some of the members doubting whether it ever so prevailed, the subject was laid aside. In 1852, however, it was so decidedly epidemic, not only in the city but in the country around, that it attracted the attention of the least observant, non-professional portions of the community, and in 1853, after yellow fever had made its appearance in Montgomery, I called the attention of some of my professional brethren to these facts, in support of the views which I *then* entertained, and they gave it as their opinion, that these jaundice epidemics were nothing more or less than the manifestations of a yellow fever epidemic influence. My views, with the facts, were submitted also to my brother, Dr. David Holt, of Woodville, Miss., formerly of New-Orleans, who has had an extensive experience in yellow fever, and the diseases of the South, and in whose judgment and opinions I have much confidence, and he did not hesitate in expressing the opinion, that the epidemics in Montgomery, as well as that of Loudon, were genuine and *bona fide* yellow fever epidemics. Well, if it be so, though I do not feel like pushing the matter too far, for fear I should be accused of entertaining heretical notions, yet I would like to propound a few questions, which are neither idle or impertinent, hoping that some one who may feel himself competent to the task will undertake to answer them, which if satisfactorily done will go a long ways towards settling many controversial points with regard both to the causes and the pathology of yellow fever. Is there then such a disease as *idiopathic jaundice*—jaundice "*per se*?" What relation exists between yellow fever and jaundice? Is the jaundice of yellow fever the result of the essential and specific cause of yellow fever, or is it the result of the operation of other and general causes? Is jaundice an essential element in yellow fever? If jaundice is, under any circumstances, idiopathic, or a disease "*per se*," how is the fact to be known? Now, I ask these questions in all earnestness, for I do not much like this plan of having to guess at matters, if they can be got at in a more reliable way. How was I to know that in the two Pensacola patients I had *two cases* of yellow fever? And how was I to know when turning off my jaundice patients, with a few rhubarb pills and a bottle of dogwood and wild cherry bark bitters, that I was turning off so many cases of yellow fever?



But I must leave this subject and these inquiries, and return to the subject which I was discussing, namely, the separate and sui-generic character of the zymotic diseases and their causes, and the nature of the zymotic process; and I desire to impress upon the mind of the reader, the necessity of separating and keeping in view the phenomena which arise from the direct operation of the *first, essential and specific cause*, from those which arise from the operation of *general causes*: for while the former determines the disease, and shapes its course and duration, and preserves its essential sui-generic character, the latter furnish the phenomena, which though non-essential, enter into and help to make up the morbid concatenation of each, and giving rise to the changes, modifications and complications to which they are all liable. While, therefore, I maintain that the prime, essential, and specific cause, whatever it may be, *operates from the beginning to the end of the disease*, giving rise to its true pathognomonic signs, I cannot be understood as maintaining that *all* the phenomena which arise in their progress, and which necessarily enter, as it were, into their composition, are to be ascribed to the *direct* operation of the *first* cause, for many of the causes of these *pre-exist* in the system, and only await the action of some *specific cause* to bring them into life, and give them activity and direction. Thus *fever* which is made up of an aggregation of morbid phenomena, and which may arise from almost an infinite number and variety of causes, and which forms a prominent trait in the character of a large number and variety of diseases, can be regarded only as a *general pathological condition*, without the operation of an essential and specific cause to give it *individuality*, or "a local habitation and a name." Hence, the *fever* of small-pox, measles and scarlatina, or of typhus, typhoid, or yellow fever, can with propriety be viewed only as a general pathological condition, which is *common* to them all, and which is *identical* in all, except so far as it is controlled by the prime, essential and specific cause of each, which preserves to each throughout its course, its essential and sui-generic character, notwithstanding the changes and modifications which they are subject to from other causes.

Though there may be a triteness in these remarks, if the proper weight of importance be attached to them, they will lose that character, and this importance is manifest in the necessity for a *correct diagnosis*, upon which alone the successful treatment of all

diseases in a great measure depends. In the analysis, therefore, of these diseases, as well as in their treatment, too much care can not be taken to separate, and to keep separated, the causes, and the symptoms which belong to them in their individual and sui-generic character, which constitutes their special pathology, from those, which by being common to, and entering into the composition of them all, constitutes their general pathology: for, according to my observation and experience, it is unquestionably true, that while each of these diseases requires a course of treatment, which is best suited to them in their individual character, and founded upon their special pathology; that treatment, whatever it may be, is *always more or less*, and often *wholly* amenable to treatment upon *general principles*, founded upon the *general pathological condition*, which is the result of the operation of general causes, and not of the specific cause of the disease. It is unnecessary for me to cite examples, as any and all the diseases which I have named will furnish them in abundance, if viewed in the varied and modified aspects to which they are constantly liable, from the causes which I have stated, and though the principles which are involved, and which I am urging upon the attention of the profession have constituted the chief theme, and the "*burthen of my song*" from the beginning to the present time, and upon which my classification of fevers has been founded, I do not feel willing to let the present opportunity pass without re-expressing the opinion, that a want of proper attention to these matters, and not keeping them at all times in view, has been the principal cause of the want of success which has often attended the treatment of these diseases, and which has led to the abuse, and finally to the rejection of remedies which, though improper or unnecessary under one aspect or state of affairs, are under other aspects and circumstances most appropriate and beneficial. To this fate, at one time or another, have the lancet, opium, mercury, tartar emetic, and all the *leading* articles of the *materia medica* been subjected, and to this fate will they continue to be subjected as long as the treatment of these diseases in a *single aspect*, or in the character of their *special pathology*, is *persisted in without regard* to the *general pathological condition* which surrounds and invests them.

Well, I will lay aside, for awhile at least, these *generalities*, and come to the part of the subject, with which I started out in this letter, which if not more interesting, is at least, more intricate,

namely, an inquiry into the nature and mode of operation of the causes of the zymotic diseases. And to show what my ideas are with regard to the zymotic process, as applied to the production of disease, I will select for illustration the vaccine disease, or vaccination, premising that so far as concerns the zymosis merely, it is essentially the same in the whole class of zymotic diseases, while the results which depend upon the *peculiar nature* of the zymotic cause, are often widely different, and belong to these diseases in their individual character. An atom of vaccine or variolous virus introduced under the cuticle by means of a prick or scratch, so slight as scarcely to create a sensation, will remain several days without producing any sensible or perceptible impression, and sometimes all traces of the prick or scratch will disappear, during which time there is no evidence of the work which is going on within, there being no manifestation either general or local, of nervous disorder or of vascular disturbance. But presently a little speck of inflammation shows itself at the point of the insertion of the virus, where a vesicle forms, which goes on to enlarge, and is surrounded with an areola of inflammation, which increases until the pustule is fully and maturely formed. And this is what I understand to be the zymotic process, which requires for its accomplishment the time from the reception of the zymotic cause, through the period necessary for the regeneration or reproduction in the system of the same zymotic cause, up to the time of its maturation, which will require a longer or shorter time according to the *specific* nature of the cause: the vaccine virus requires about ten days, the variolous in *inoculation* a little longer. But I have not stated all which occurs during the zymotic period, for about the *seventh day* from the insertion of the virus, a febrile movement is set up, showing that it is no longer a *local* affection, but that the *whole system* has been brought under the influence of the local affection, or is laboring under the influence of the zymotic cause, which latter is the most reasonable supposition, as when the variolous virus has been used, the febrile movement is soon followed by a crop of vesicles which appear in various and remote parts of the body, which mature about the time of the parent pustule—about which time we may suppose the zymotic process to have been completed, and about which time the febrile movement generally ceases. When the disease is taken in the natural way, the febrile movement furnishes the *first* evidences of the existence

of the disease, and it is generally two or three days, before the eruption shows itself. In this instance, there is no *local* affection, as in the other, to get up a febrile movement in the system, and the only reasonable inference is, that the fever is the result of the specific virus, *undergoing the zymotic-process*. This question, however, belongs more properly to small-pox, in its individual character, and I wish to confine myself to zymosis merely, which is confined to no *one* disease, but belongs alike to small-pox, measles, scarlatina, typhus, typhoid, and yellow fever, and many other diseases—some having a specific *virus* as their cause, and recognized as *contagious*, while others, of an *infectious character*, have their origin in a *specific animal effluvium* which arises from excrementitious substances, and diseased bodies; and others, again, originate from *specific effluvia* and *aerial poisons*, requiring for their production an atmospheric contamination, as in the case of epidemics generally. Of the first, we have an example in small-pox, which is both contagious and infectious—of the second, in measles, scarlatina, typhus, and probably typhoid fever; and of the third, in yellow fever; between some of which diseases there are many striking points of resemblance, and of some relationship—and in one respect, they all belong to one family, that is, they are all zymotic diseases.

Now, in examining into the manner in which these causes operate, and the relation which they bear to the diseases to which they give rise, and to other causes which enter into their composition, I shall have to adopt an aphoristical and catechetical style of argument, more, however, for the sake of convenience, than from an appreciation of its elegance and beauty.

Having seen from the example or illustration given, that the zymosis, or ferment, commences with the insertion or introduction of the virus or poison into the system, we are led to the inquiry as to how a disease is thus produced, when and where the disease commences, and what part the zymosis sustains in the disease, whether as an element in the disease, or as an active agent merely in its production. The answering one of these questions would perhaps suffice for them all; but I will not attempt such a wholesale manner of disposing of them. I do not hesitate however to express the belief that it is the *first link* in the morbid concatenation, and consequently is an essential as well as a primary element in all the diseases of the class, having its *origin and*

*seat in the blood.* When the poison is introduced, we may suppose the process of its absorption to commence, and its diffusion to go on, until the whole mass of the circulating fluid becomes tainted or contaminated with the poison. It is not, however, to be understood that this diffusion and contamination constitutes the zymosis, but that while this operation is progressing, the blood itself is undergoing those changes in its constitution, which constitute the zymotic process, namely in the *regeneration or reproduction* of the poison in the blood, from *materials furnished by the blood*. Some idea of the extent of this reproduction may be formed, by the supposition, which is a reasonable one, that a single atom of variolous virus having undergone zymosis in one man would probably furnish material sufficient to poison the blood, and excite zymosis in every human being on the face of the earth; such is not the case with all the zymotic diseases, some being of doubtful contagious character, some imperfectly eruptive, and few furnishing a palpable virus, which however does not alter them with regard to their zymotic character. From the fact that the zymotic action furnishes no ostensive evidence of its existence, and progress, it has been denied that it is entitled to be considered as one of the stages of disease, but the formation of the vaccine pustule shows from the beginning to the end, not only its existence, its progress and its termination, but, that it is an essential element in the disease, if not the disease itself. Vaccination is often successful without the presence of any fever, or other constitutional symptoms and *shows* itself to be nothing more than a *local* affection; yet this local affection or pustule, is not really the disease, but rather the result and consequence of the efforts of nature to relieve the system of the new products as they are generated by the zymotic process. And so it is with all the zymotic diseases; as the zymotic products accumulate, they become obnoxious and offensive to the system and the vital processes, and are thrown off by the natural emunctories, or through channels which are determined by their elective affinities, depending upon the peculiar and specific nature of each poison. Thus the zymotic products of vaccination seem to seek an exit, at the point of the insertion of the virus as shown by the *formation* of a pustule at that point. The *products* of small-pox, measles, scarlatina, &c., make their way through the skin, and some of the mucous surfaces, in the shape of eruptions, each peculiar in character to itself, and each manifesting a preference for

particular organs or parts of the system by the irritation which they kindle up in those organs or parts. While the zymotic products of typhoid fever—which, though not strictly an eruptive disease, is, as well as typhus and yellow fever, often attended with eruptions peculiar to the typhus family—find an outlet through the follicles and solitary glands of the small intestines; while the products of the zymotic process in typhus and yellow fever, seem to have no other means of escape than through the natural emunctories.

This would seem to bring us to an examination of the consequences of the elimination or non-elimination of these products; but I am not prepared for that yet, having other questions of importance yet unsettled. But finding that I shall not be able to get through with all which I have to say on these subjects, I will bring this letter to a close, by remarking that I do not wish to be understood as entertaining the opinion, that the zymotic stage of these diseases, (or the stage or period of incubation, as some writers term it,) is of chief or paramount consideration and importance, but that as a *primary element* in these diseases, it is important in reference to their *special pathology* to the manner in which the causes operate to produce them, and especially as showing the agency which the blood has in their production.

If I have not succeeded in proving that zymosis constitutes an essential part in these diseases, I have at least shown that it is entitled to more attention than is generally given to what is termed the *period of incubation*; a term, however, which I confess I do not exactly understand in a *figurative* sense, though I am somewhat *practically* familiar with it in a *literal* sense, about this time—having *quit physic*, and *taken* to the honorable calling of a farmer.

As ever, yours, &c.

SAML. D. HOLT.

## PARIS CORRESPONDENCE.

## ARTICLE XX.

*Extract of a Letter from DR. THOMAS A. MEANS, of Georgia, now in Paris.*

Numerous experiments with the new anæsthetic Amylén (H, C, ) first introduced into the profession by Professor SNOW, of the English school, and now attracting the attention of the Medical world in Paris. It does not "take," however, with the leading surgeons, such as Velpeau, Nelaton, Malgaigné, Chassaignac, Maisonneuve, etc. Much of this apparent opposition might, I fear, be traced to an overweening jealousy for the claims of French science, and a tardiness to admit pretensions from beyond the channel. I have seen many patients under its influence, and find its action characterised by a freedom from that unpleasant sensation which always attends the administration of chloroform, i. e. nausea. Yet, the quantity, necessary to produce anæsthesia, is considerably more than that of the latter agent. What the particular results of these professional experiments may be, I cannot pretend to foretell.

M. Chassaignac has now in his hospital, some forty patients under treatment for *abscess*, by a new system which he terms "Drainage." It is simple, rational, and effective. He employs a gum elastic tube about one-eighth of an inch in diameter, perforated along its sides with small holes, at intervals of two or three inches. When called to operate, he thrusts a trochar and canula entirely through the abscess at its base—withdraws the trochar, inserts the tube in the canula, passes it through, and then removes the canula itself—leaving only the flexible tube to perform its work of drainage. The gum elastic tube may be of any length required, and can be readily cut, at any point, with scissors. After it has been introduced, the opposite ends are approximated and confined together by a small cord, and the operation is complete. All can be done in ten minutes, or less time. Some two or three times per day, the tube should be moved, one or two inches, so as to allow a free exit of pus through the openings. This method is particularly applicable in diffusive abscesses, but may be used in other forms. I herewith enclose you a sketch, drawn under the eye, from a patient who entered the hospital with an extensive abscess, involving the whole upper portion of

the thigh, and extending itself to the iliac region. After this operation for drainage, two weeks only elapsed until a cure was effected. No other treatment was adopted, save regimen and diet. Indeed, it is astonishing to witness the many rapid, easy, and effectual cures which follow from the practice of this simple method of Chassaignac. It is proper to say, however, that it is not yet generally adopted by the surgeons having charge of the various hospitals; yet it will, I think, ultimately take the lead in the treatment of these affections.

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ARTICLE XXI.

*Extract of a Letter, under date 4th of March ult., from Dr. THOMAS A. MEANS, now in the French Capital.*

On Monday morning last, I visited the Hôpital Lariboisière—some two and a half miles distant from my residence—to witness two operations with the *Ecraseur*, in the hands of Chassaignac himself. A description of this surgical instrument, now so popular with French surgeons, was furnished in a letter to my father, Dr. A. M., of Oxford, Ga.,) and which I find published in the February number of your excellent journal. No further particulars, therefore, as to the construction of that instrument will be necessary.

The cases which now demanded the skill and dexterity of the distinguished surgeon, were hæmorrhoidal tumors, one of which was very large, but which under his admirable manipulations, required but fourteen minutes for its complete extraction, from the moment in which the chain was attached; while the *other* was but the work of a few seconds. Both operations were beautiful and simple, as well as efficacious.

M. Maisonneuve, perceiving some imperfections in the instrument of Chassaignac, read before the Academy of Medicine, some time last week, a paper of considerable length, in which he describes and proposes modifications and improvements, which he conceived would vastly enhance its practical value, and extend the range of its application. He suggests:

1st. The substitution of a *screw and tablet*, for the crank now employed by that surgeon.



2nd. A point of *disarticulation*, so as to allow of the application of crotchets of various shapes and sizes, adapted to the kind of ligature used.

3rd. A *curved shaft*, and chain, designed expressly for the uterus.

Some of the defects in Chassaignac's instrument may be thus enumerated :

1st. Its limited *lever power*.

2nd. The difficulty of attaching the chain ; and

3rd. Its *closed cylinder*.

In operating with that form of *Ecraseur*, upon cancerous tumors of the breast, for example, an incision must first be made through the skin, to the subcutaneous cellular tissue, before a sufficient force can be exerted to crush the dense mass below. Indeed, it becomes necessary, in all cases where the skin is involved, to incise the whole circumference, before anything can be satisfactorily accomplished.

And here, we may be permitted to say, "*en passant*," that in no case can the "*Ecraseur Lineaire*" of Chassaignac be used with decided advantage, unless in exceedingly *soft tumors*, such as hæmorrhoids, or bloody excrescences. And yet, even in this limited field of operation, much may be effected by it.

With Maisonneuve's modifications, however, there seems to be no limit, either to its motive power, its leverage, or its application. For this surgeon has extirpated with a simple thread of platinum, (one of any flexible metallic wire may be used,) and within the lapse of a few minutes—without hæmorrhage,—the inferior lip, diseased with a cancerous affection. He has also removed voluminous hæmorrhoidal bourrellets,—patches of detached skin,—tumors of various forms—ganglionic, carcinomatous, &c., &c., together with uterine polypi—diversified excrescences—the prepuce, &c. While upon the *dead body* he has satisfactorily illustrated its action upon the tongue, the round ligaments of the uterus, the integuments of the scrotum, and the various other parts, whether involving the skin, or otherwise. Both the instruments above referred to are from the celebrated establishment of *Charriere & Son* of this city, and are but modifications of the old *Serré-Nœud* of Græfe,—the *latter* surgeon retaining the old name with "*nouveau*" attached, while the *former* dispenses entirely with the "*ancien nom*," and calls it the "*Ecraseur Lineaire*."

## JACKSON-STREET HOSPITAL REPORTS.

## ARTICLE XXII.

*Gunshot Wound of the Hand; Amputation of a portion; preservation of the Thumb and Index Finger; Recovery.* By ROBERT CAMPBELL, M. D., Demonstrator of Anatomy in the Medical College of Georgia.

Jim, a colored man, aged 30 years, the property of Mr. George Robinson, of Hamburg, S. C., was admitted into our Hospital, Dec. 24th, 1854, having, an hour previous, received the charge of a pistol through the palm of the left hand, while the palm was over the muzzle. Upon examination, I found the tissues extensively lacerated and the three inner or ulnar meta-carpal bones denuded and dislocated from the carpal row, one of them being fractured. The ulnar side of the index finger was also bare; but the flesh on the inner border of the hand, apart from having the corresponding meta-carpal bone, which supports the little finger, separated at its proximal extremity, seemed to have escaped destruction.

In consultation, an immediate operation was determined upon, to save the patient farther loss of blood and suffering, which were becoming excessive, to the rapid deterioration of his strength. I accordingly removed, under chloroform, the middle, ring and little fingers, with their corresponding meta-carpal bones, entire—carrying my scalpel around the head of the meta-carpal bone, and base of the first phalanx, of the *little finger*, so as to prolong the extent of the flesh on the inner border of the hand, into a flap of sufficient length, to bend over and cover the front of the carpus and the whole of the denuded side of the meta-carpal bone of the *index finger*—thus bringing the skin of the radial and ulnar borders of the hand in apposition, having extirpated the intervening bones, except that of the index, and cut out the disorganized flesh.

After cleansing the wound as well as possible, controlling hemorrhage by ligature and adjusting one or two of the carpal bones, which were somewhat displaced, a few interrupted sutures, behind and before, served to retain the flap in position, when the stump was dressed with the cold-wet-bandage, as being the most appropriate treatment under circumstances so well calculated to induce high inflammatory action. An anodyne having been administered, the patient was put to bed.

It would be tedious and unprofitable for the reader to be obliged to wade through the monotonous annotation of the daily progress of this case, as he is too often compelled to do, in order to gather its few important features which have a practical interest. Suffice it to say, that notwithstanding the precautionary measures against inflammation, so extensive and aggravating was the injury, in this sensitive and susceptible part, that on the fourth dressing, an intense inflammation was discovered in the hand, wrist and forearm, requiring the employment of still more energetic means, both local and constitutional, for its subjugation.

The margins of the wound appeared to be sound and to have united, almost entirely, by the first intention; but the wrist was the principal seat of action, the tumefaction extending nearly to the shoulder-joint. On the 25th of January, a large quantity of pus was discharged, on lancing the dorsum of the wrist. This discharge continued to increase to such an extent, as to cause the patient, already enervated by suffering, to faint on getting up. One other lancing had to be resorted to—in the forearm.

From this time, upon the administration of the crystalized tartrate of iron and potash, 5 grs. three times a day, a generous diet, beef tea, chicken, &c., and Port wine *ad libitum*, the case progressed to a favorable termination—the strength of the patient improving and the suppuration diminishing until Feb. 25th, when the patient was discharged, well; but with a somewhat stiffened wrist-joint and index finger.

A year after, I saw Jim, and had the opportunity of presenting his case to the Class of that Session, at Jackson-street Hospital. He had for a long time since the operation been engaged in active service as a whitewasher, &c., earning good wages: free use having, in a great measure, overcome the stiffness of the wrist and finger—and his left hand, or its most essential elements, the thumb and index finger, remain to him, an efficient and valuable member—the satisfaction of this result fully compensating for the regret entertained at one stage of the case, that the amputation had not been performed above the wrist-joint, at the point of selection.

The similarity between the above and the following case, quoted from the London Lancet,\* suggested to me the publication of the former.

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\* American Edition for May, 1857, page 417, "Hospital Reports."

*"Comminuted Fracture of the Bones and extensive Laceration of the Integuments of the Hand; Amputation of a Portion; Preservation of the ring and little Fingers; Recovery. (Under the care of Mr. WEEDON COOKE.)"*\*

"D. R.—, aged sixteen, was admitted Sept. 30th, 1856, in a collapsed condition, caused partly by the shock of an injury just sustained, and partly by loss of blood. He had been assisting at a factory for biscuit-baking by steam apparatus, when the right hand became entangled in the machinery, and much laceration was the result. Upon examination, it appeared that the thumb was torn from its attachments, and hung loose; that the meta-carpal bones of the index and middle fingers were much crushed, and broken up into small fragments, and the integuments both of the back and palm of the hand, including the muscles of the thumb, were most severely lacerated. When first admitted, there was free arterial hæmorrhage, which was checked by pressure with dry lint and bandage. After consultation with his colleagues, Mr. Cooke decided neither to attempt to save the fingers, nor to amputate the hand, but to remove only the thumb, index and middle fingers, nipping off the corresponding fractured ends of the meta-carpal bones, and obtaining as good a flap as possible from the palm of the hand. This he did, and every thing progressed favorably. The boy was extremely weak, and required high feeding. The healing process went on partly by adhesion and partly by granulation, and was complete on the 1st of December. The two remaining fingers admit of flexion and extension, and when educated, and aided, perhaps, by an artificial thumb, will be of the greatest service to the poor youth in writing and even prehension."

The two cases above detailed, agreeing in several of their prominent features, unite their accordant testimony in favor of the rationality and justice of the general precept in Surgery, which enjoins forbearance and moderation upon the decision of its councils, as regards the amount of permanent injury, which shall be inflicted, to remedy the misfortunes occasioned by violence or disease; when at the same time a course has to be determined upon, which shall not compromise the more immediate and vital considerations in the welfare of the sufferer. Yet it is too often the fact, as regards the interests involved in the contemplation of these cases, that this cunningly fashioned and most invaluable mechanico-vital instrument—"this *chef-d'œuvre* of mechanism, which some of the philosophers of antiquity regarded as the distinctive character of man, and even as the source of his intellectual superiority-

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\* Royal Free Hospital, London.

ty,\* is unhesitatingly devoted, by common consent, to be sacrificed, entire, to the over-wrought apprehension of that fearful malady—Tetanus, the liability to which is, to some extent, entailed upon it, by its peculiar physical endowments.

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*Periodic vs. Typhoid Fever.* By JOHN HERBERT CLAIBORN, A. M., M. D., Petersburg, Virginia..

During the latter part of the summer, and throughout the autumnal months of the year, there occurs in some sections of this city, in its suburbs, and in the surrounding country, an endemic fever, identical, we believe, with the fever often prevalent at the same season in various localities in the whole of Tide-water, if not Piedmont Virginia, and which is designated, by different practitioners of medicine, as typhoid fever, slow fever, nervous fever, remittent fever, continued fever, and perhaps one or two other expletives, indicating a want of accuracy and agreement in nomenclature, that is sometimes, we fear, an exponent of uncertainty as to the true character of the disease. Following Dr. Bartlett,† we propose to call it periodic fever—a name which, while it is sufficiently comprehensive, does not suggest an erroneous pathology; a charge that might be well fastened on several of the prefixes before mentioned. We desire to draw an especial distinction between it and typhoid fever proper, confident that though typhoid fever is sometimes found in our midst, it is not the fever in question, and persuaded that any uncertainty with regard to this fact in the mind of the physician attendant may lead to results in practice not only inconvenient but fatal.

We believe this endemic fever to be undoubtedly the analogue of the old fashioned bilious remittent fever of this latitude, familiar to our fathers in medicine fifty years ago, but so changed withal, with the times, that we suspect it would not add to their posthumous fame, could they revisit these places, which once knew them so well, and attempt a diagnosis or conduct a treatment. It is indeed so unlike bilious remittent fever, even of some few years past, not only in the absence of severe constitutional symptoms attendant on its inception, but in the general absence of any special biliary disorder that unprofessional people, who have seen much of "bilious fever," in its unmistakable type, soon lose confidence in a physician who asserts that this is their old enemy. He must have some new name for them, and *typhoid* fever is the most fashionable and the most imposing. This title we regard particularly unfortunate, if the practitioner honestly apply it as indicative of the nature of the disease, and one that must inculcate erroneous pathology. Any fever or any disease may assume a typhoid type, etymologically speaking,

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\* Cruveilhier.

† Fevers of the United States.

but remittent fever cannot become in any stage of it, typhoid fever, considered as a special disease, originating in a specific poison, and according to Louis and his school, establishing its entity in a peculiar form of intestinal lesion.

The object of this paper is to endeavor to attract the attention of the profession, particularly of this portion of Virginia, to the want of technical precision which prevails as regards the use of the term typhoid fever, and to attempt to draw as marked a distinction as we may be able, between it and the autumnal endemic fever.

Autumnal endemic fever we regard as essentially a periodic fever of the remittent variety, but it has displayed some difference in its features as it occurs in the earlier or latter parts of the season. We will endeavor to detail its symptoms, not from authorities, but from our remembrance of individual instances, and from cases collated from our note book.

The first cases of the season are usually mild, both as regards intensity and duration of abnormal action. These usually occur about the first of August. A physician will perhaps be summoned to a gentleman who will tell him that he is not sick much, but, that he believes he has taken cold from sleeping under an open window. He will complain of pains and soreness in the limbs and back, of a want of appetite and spirits, and of a general feeling of malaise. He has been attending to his business, though with some discomfort for several days, and has at length been compelled to remain at home, and is probably in bed. He will remark that he is very weak—unaccountably so. His bowels are in good condition, unless he has disturbed them with cathartics. His tongue is moist and clean, except near its root, where it is slightly furred, and it is large and often indentated by the teeth. His skin is warm, not unpleasant, and dry or moist, as he is seen at the period of exacerbation or remission. His pulse is rarely 100, is not full, but quick. His countenance is natural, except on exertion, when it exhibits great languor. In the exacerbation it is perhaps a little flushed, and his eyes are little injected. He has had a slight pain in the head occasionally for a day or two, and his nose has once or twice bled a few drops or more, and there is also some cough, but unimportant.

Sometimes there will be more disturbance of the sanguiferous system than is noted in this case, and the face will be flushed and the pulse full and bounding, and there will be marked and distressing cephalalgia, and perhaps a little incoherency or quickness of speech. But in such instances we have usually found some other source of irritation beside the original disease, as a meal of undigested food, or improper tampering with drastic medicine, or some moral cause. And these are generally the only cases occurring early in the season which are apt to be prolonged and troublesome.

Now, the existence of what pathological condition do the symptoms which we have enumerated indicate? There is no important capillary congestion in the original and uncomplicated case. There

is no anatomical lesion to attract attention. There is no digestive or hepatic or other visceral disorder. The nervous system is chiefly at fault. There is perversion of innervation. And this is confessedly the primary action of the poison of malaria. There is no necessity for secondary derangements of other functions of the body. We have an antidote for the poison—a specific for the disease at this stage—cinchona. Peruvian bark has scarcely ever disappointed us in its anticipated effects. In the language of an attractive author, quoted from memory—"Amidst the manifold uncertainties of medical science, it is gratifying to know that there is at least one important therapeutical relationship established, which defies alike the assaults of quackery and the machinations of skepticism." A full dose of the sulphate of quinine, exhibited at the first appearance of remission, will generally prevent or materially modify the succeeding exacerbation. We say, given at the remission, because we think it acts more happily when given at this period; but we are not averse to giving it at any stage, when it is necessary it should be administered. We do not believe it will act as an excitant in any dose, except in peculiar idiosyncracies—nor do we give it as a pure sedative, as we would digitalis, but we give it as an *antiperiodic*. In this light alone we use it in such cases. It is sedative in them in view of this property. It neutralizes that poison the irritation of which is manifested in the reaction of fever. A few doses, combined or not with a mercurial or an opiate, as special cases may indicate, usually cut short the disease. It never "runs into typhoid fever."

In cases occurring later in the season, the symptoms are apt to be graver and more serious from the beginning. The exciting cause seems to have acquired concentration and malignancy, with not so much of premonition, as exhibited in malaise, languor, debility, &c. The patient will be taken usually about noon or early in the afternoon with a marked chill, lasting some fifteen or thirty minutes, with pains in the back, head and limbs, and accompanied with a good deal of thirst. To this there will succeed a fever, lasting some five or six hours—then subsiding into a distinct remission. In which stage there is often considerable diaphoresis, and a much more comfortable condition for a few hours. After this, spontaneously, or consequent upon another period of vital depression, there will occur another rise of fever, to be followed by another period of remission, only less marked than the first; and the same phenomena will be repeated if the disease be unchecked, until in a few days it becomes difficult to perceive, without close observation, any period of remission in the twenty-four hours. It is in such cases the idea prevails that the disease is a continued or typhoid fever. In almost all of the cases occurring later in the season, there are evidences of visceral disorder—sometimes hepatic—sometimes congestion of the spleen, and of the whole portal circulation—evinced by fullness and tenderness over the bowels. The tongue is smaller and less moist—

coated more or less with fur, and disposed to be red at the point and edges. There is frequently complained of too, that almost pathognomonic symptom of bilious remittent—an annoying, tenacious mucus in the fauces. The pulse is usually more frequent—as high as 120, and fuller and harder. The face is flushed—sometimes dusky—and there are oftener symptoms of cerebral congestion, as evinced by dullness or delirium. There is the same tendency to bleeding at the nose, and oftener cephalalgia.

It is in the treatment of these cases the “triple base” of Maillot so accurately expresses the indications to be fulfilled, viz: “To combat the visceral lesions; to oppose the return of the paroxysms; to prevent the occurrence of relapses.” To carry out the first, it may be only necessary, if the patient be seen in the paroxysm, to administer six or eight grains of the mild chloride with as many of Dover’s powder, and one or two of ipecac, applying a dozen or two leeches to the head or stomach, according to the force of the reaction and its concentration at either point. The early occurrence of the remission will afford opportunity to exhibit the antiperiodic, which will effectually meet the two latter. Fifteen or twenty grains of sulphate of quinine given in one dose at this time, or in two doses of a few hours interval between them, will actually cut short an attack. Indeed, I have seen it succeed, in summarily effecting this end, after the disease had already continued unabated for more than a week, and when a dry tongue, nervous tremors and incoherency of language had apparently ushered in the typhoid stage. After two or three days of treatment, if the fever still continue, which is sometimes the case, we have found smaller doses of quinine, five or six grains, exhibited in the remission, to answer a very good effect—gradually neutralizing the poison of the disease, and hastening convalescence, without inducing any of the disagreeable symptoms of cinchonism. We sometimes combine the quinine with calomel, ipecac, and opium, at its first administration; and where there is much visceral engorgement, the antiperiodic is often thus more effectual.

Cases subjected to this treatment in their early stages have not generally in our experience “run into typhoid fever.” Of nineteen cases, not selected, but transcribed from our note book of last September, the average duration of treatment was six days. Six more days would cover the average period of convalescence. And this large average was chiefly owing to the inclusion of two cases, which were sick four and eight weeks, and which finally assumed so much of the typhoid type as to lead us at one time seriously to doubt the accuracy of our original diagnosis. These were two young men, aged 19 and 21, respectively, occupying the same room, and who lived in a section of the city where typhoid fever, as it is called, prevails every summer. They both had been treated pretty actively with purgatives and without quinine, for several days before I saw them. During their convalescence two other young men,



living on the opposite side of the street, and who had nursed them occasionally during their sickness, were taken in precisely a similar manner as the two former, and recovered under the treatment which I have detailed—one in three days and the other in less than a week. Now, I am sure that all four of my patients had the same malady, and I am reduced to the alternative of deciding that quinia cured the typhoid fever in the two latter cases, or that the two former were sick with a different disease, viz; periodic remittent fever. This I believe to be the proper conclusion.

When the fever has persisted for one or two weeks, in spite of the treatment adopted, and the tongue begins to be dry and brown, and fissured, and the bowels are irritable, we usually recommend, about once in 24 hours, four or five grains of Dover's powder, with as much of hyd. c. creta, if there should be a necessity for the latter in the condition of the secretions, and apply at the same time a mild vesicatory over the abdomen. We continue the use of the antiperiodic, however, exhibiting three grains of quinine or an ounce of the infusion of cinchona and serpentaria every six hours, alternating sometimes with fifteen or twenty drops of oil of turpentine.

With regard to the use of purgatives. We have found them generally not only unnecessary, but positively prejudicial at any stage of the disease, and evincing, even the mildest of them, aptness to induce irritation of the bowels.

If the first dose of calomel which we administer does not operate of itself in twelve hours, we then, not sooner, follow it with half ounce of cold pressed ol. ricini, or a Seidlitz powder, and relying upon the simplest laxatives or upon enemas during the remainder of the attack. Sometimes, in a case sick for a week or ten days, we have not used more than one gentle purgative. Occasionally we have regretted the use of this—never its omission. The farinaceous articles of diet, which are allowed, together with the cold acidulous drinks, so grateful to the patient, are generally sufficiently laxative; and in protracted cases, these latter have often to be forbidden, owing to the great tendency to diarrhœa.

The *prognosis* of this fever, as it occurs in this city and its vicinity, is favorable. Very few cases prove fatal. Perhaps not one in thirty. Its *cause* and its *nature* are shrouded in the same obscurity that masks our knowledge with regard to the essential character of all other fevers. When we shall have certainly determined and accurately analyzed the one, we may then possibly be able to elucidate the other. We are in the habit of attributing its exciting cause to the influence of malaria, whatever this subtle agent may be. We assign to the disease this origin, because it prevails exclusively in those portions of the city, and in the surrounding country, where the sole or main conditions for the generation of this poison abound, viz: \* a porous, earthy surface, capable of absorbing moisture, occasionally soaked with water, and subsequently exposed to a drying

\* Watson's Lectures. Martin on Climate.

process, under a certain degree of heat. We believe this description well represents the character of the soil in the suburbs and vicinity of the city, if not in a considerable part of Eastern Virginia. The fever, when endemic within the precincts of the city, almost invariably occurs upon unpaved streets, and large and illy drained lots. We know of certain localities that are almost always visited with cases of it some time during the autumn. Unless in the instances of persons who have been infected elsewhere, I have very rarely met with it on any paved street of the city, except one—Bolingbroke street; and this runs adjacent to and parallel with the south bank of the Appomattox river, and exposed, therefore, on its northern sides, to the malaria arising from the unpaved lots between it and the river, and on the opposite bank of the river. The healthfulness of the residences on the south side of the street, when compared with those on the north side, is a matter of common remark.

We think it sufficiently well established that the fever in question originates in malaria. Of this malaria we do not propose to give any definition. We know but little of it, except its name and abode. We suppose that it is a *poison*, disseminated in the atmosphere about the localities of its origin; that it is inhaled into the lungs; that it operates primarily upon the nerves, secondarily upon the capillaries, and that the fever is but a reaction of the system in its efforts to reject or eliminate the disturbing agent. And in briefly saying this, which of itself cannot be demonstrated to be more than conjecture, we say all, as far as we are apprised, that is known of the nature of periodic fever.

The *diagnosis* is a practical question—one involving most important issues in the treatment, and one, therefore, which cannot be too critically examined. Remittent periodic fever we regard as *curable*—it may be jugulated—it may be cut short. Whatever may be our uncertainty with regard to the essential nature of the malady, Heaven has not left us ignorant of the antidote. We have this in its most convenient form, in the sulphate of quinia. We may be incompetent to determine the mode of action of this medicine, but its benefits are a matter of observation, and are constantly subjected to the test of the senses. They are unmistakable. Dr. Headland in his "Action of Remedies," has concocted a very pretty and a very plausible theory, showing how it cures. But this is only theory—its effects are facts. Typhoid fever, on the other hand, is *incurable*. A distinguished lecturer and physician,\* speaking of the Irish typhus, remarks, "We cannot cure fever. No man has ever cured it." So of typhoid fever, which, if not identical in nature with typhus, has a similar origin and many things in common. The man is not born who can cure it. There is no specific which will cut it short. The antidote for its poison has not yet been discovered. An effort to jugulate it may be productive of the worst consequences. It is proper that certain symptoms, arising during

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\* Wm. Stokes, M. D. Clinical lectures in the Meath hospital.

its progress, should be combatted, and that obstructions in the way of recovery should be removed when it can be safely attempted; but nature must finally conduct the treatment and effect the cure, if at all effected. Hence the importance to the physician of an early and accurate diagnosis. Since the minute researches of Louis, Gerhard, Chomel, J. B. S. Jackson and others, into the pathology and symptoms of typhoid fever, it has not been generally considered a very difficult matter to diagnose this disease. But there are very many cases of the endemic fever, which we have endeavored to describe, that are not at all dissimilar in some important features; from typhoid fever and we have seen some very good observers evidently mistake the one for the other. The diseases are often alike in their mode of attack—in lurking each about a neighborhood or vicinity—in the frequent succession of cases in a family, or in going through a family as it is termed. Both, too oftener attack the young; and to both new residents are most susceptible. Both are commonly attended in the early stages with buzzing in the ears and with epistaxis; and in both there is slight bronchitis. In both the bowels are very susceptible to the action of purgative physic, if not in a state of diarrhœa. And in both, if prolonged, there is remarked the same dusky hue of the countenance, and the same dullness of intellect, or delirium. They are unlike, however, in their relative gravity or mortality. I do not think that the deaths from endemic fever in this city and its vicinity would average one in forty. This is about the proportion shown from the imperfect statistical tables to which I have had access. In typhoid fever, on the contrary, wherever occurring, the average mortality is always much higher. In the Massachusetts general hospital in 1829, the average was only one in twenty-five, but in the same institution in 1830, it was one in three and a half; and the average in it for fourteen years was one in seven. Of 140 cases observed by Louis, more than one-third died. According to M. Piedagnel, the mortality is about one in seven. According to Chomel this varies very much with season, age, acclimation, &c.; but in all instances his average was much higher than in any endemic autumnal fever which I have known in this latitude. But again. The two diseases differ in this respect. The endemic fever of which we are treating is essentially a fever of the summer and autumn, and never prevails endemically at any other season; while typhoid fever, according to the experience of some of the best observers, is by preference a disease of winter; or at the least, according to Dr. Bartlett, does not occur in any one season more frequently than another. The diseases differ moreover in the absence, in remittent periodic fever, of the rose colored spots, one of the most remarkable phenomena of typhoid fever, occurring generally about the 14th day, on the abdomen of the patient, and according to Chomel and Genest, wanting in only 16 out of 70 cases observed by them. We regard this as a very essential difference, not only elucidating the diagnosis of remittent periodic fever, but

defining its specific nature, and establishing the fact of its malarious origin. There is no similar eruption in remittent fever, in intermittent fever, in malignant congestion, in yellow fever, or in any other fever, we believe, attributed to malarious poison. Whilst in every other form of fever having its supposed origin in the poison or infection of animal effluvia, there is either some disease of the subcutaneous glands or some eruption upon the dermoid tissue, partaking more or less of the character of the petechiæ of typhoid fever. And we instance, in support of our assertion, typhus, plague, syphilis, smallpox, measles, &c., &c. We consider, therefore, the absence of any eruption in the endemic fever of this section as an important point in the differential diagnosis.

With regard to the abdominal lesions demonstrable after death, our opportunities for examination have been so limited as to render their results of but little avail. We have made a few necropsies in view of this special question, and one of them was on a patient of one of the most distinguished medical men of the state, who diagnosed the disease to be certainly typhoid fever. In it we found no ulceration, engorgement or other affection of the glands of Peyer. Dr. Bartlett, in his work, before quoted, page 152, declares that lesion of the elliptical plates "*invariably occurs in fatal cases of typhoid fever.*" Could this fact be undoubtedly established, and would physicians use a little more diligence in their post-mortem investigations, the diagnosis of the disease *after death* would be definitely settled. Apart, however, from the inconvenience accruing to the patient from the doctor having to rely on information so tardily obtained, we must confess that we are not entirely converted to the doctrine of the duality of typhoid and typhus fevers, and therefore do not recognize the lesions of the aggregate glands as pathognomonic of one more than another of these diseases. But it does not form one of the purposes of this paper to open so vexed a question.

We do not wish to be understood as affirming that typhoid fever *never* occurs in this city or in this section of the state. On the contrary, we think we have seen undoubted cases of it. More: We have sometimes thought that there were intimations of the possibility of our malarious fevers being entirely replaced by it, in view of the fact that improvements in drainage, sewerage, &c., are gradually diminishing the causes of the former, while the increase of population, even to redundancy, in our cities, furnishes material for the enlarged development of the causes of the latter. But in none of the endemics of remittent fever, slow fever, continued fever, &c., as it is called, whether in town or country, which have come under our observation, have we been persuaded that the disease was typhoid fever proper. I have been assured by some excellent physicians of those sections of our state where the *slow fever* is almost yearly endemic, and occasionally makes devastation upon a plantation, and where it is regarded as contagious or infectious, that the disease was *undoubtedly* typhoid fever. But these same gentlemen

with practical good sense have also assured me that quinine was the treatment—that they often cut short their cases with it, and that they rarely lost a patient if called in time.

Now, while theory and experience both unite in declaring typhoid fever to be *incurable even by quinine and calomel*, these gentlemen must excuse us if we urge that they have applied to their disease a misnomer. And though we confess that it were scarcely wise to divert their attention by a new name, when they already combat their enemy so skillfully and so faithfully, yet as we advise no change in the armory, we hope they will allow us to insist on accuracy of nomenclature as essentially important to any intelligible record of the character and habits of disease.—*Virginia Med. Jour.*

+ On the Measle of the Pig; and on the Wholesomeness, as Food for Man, of Measly Pork. By ALEXANDER FLEMING, M. D., Professor of Materia Medica, Queen's University, Ireland.

The following Report was furnished to the Committee of the provision merchants of Cork, who applied to me for information on the subject to which it refers, in January, 1856. Stated briefly, the questions submitted by the Committee were:—1. What is the nature and origin of measle in the pig? 2. Are all pigs measly? 3. Can pork be measly, and that condition be invisible to the naked eye? 4. Is there any analogy between measles in the pig, and the disease known by that name in man? 5. Is fresh measly pork wholesome? 6. Is cured measly pork wholesome? 7. What is the chemical composition of the measle?\*

Twenty-one specimens were supplied to us, viz.:

Seven of fresh healthy pork, from different parts of different pigs; six of fresh pork, slightly measled; seven of fresh pork, badly measled; one of cured pork, badly measled.

"The measle of the pig is an animal parasite, the *Cysticercus cellulosæ*, or bladder flesh-worm. It infects the muscles of all parts of the body, but is found most frequently in those of the tongue, loin, and neck, and is often seen in the muscular substance of the heart, lying between the fibres of the muscle. It is seen as an ovoid bladder, from two to four lines in length, formed by a thin, transparent membrane, and enclosing at one extremity an opaque body, of a white color. This is the worm coiled up, but which, when unfolded, exhibits a head, neck, and pear-shaped vesicular tail. The head is armed by a crown of barbed hooklets, around which are

\*I was requested to associate with me in this inquiry my colleagues in the Chairs of Natural History and of Agriculture, and the Report in the text was prepared by me to embody the joint results of our investigations. It was signed by me and Professor Smith. Mr. Murphy sent in a separate Report, but his views are substantially the same. Drawings of the *Cysticercus*, and of its several parts, referred to in our Report, are given by Professor Smith in the *Microscopical Journal* for January, 1857. See also, Huxley's Lecture on the *Tæniade*, in *Medical Times* for August, 1856: and the *Brit. and For. Med. Chir. Review* for January, 1857.

placed four sucking mouths, and the neck is formed of a series of rings, which gradually lose themselves posteriorly on the dilated and bladder-like tail. In the interior of the worm are a number of microscopic corpuscles. The average diameter of these bodies is 1-1500th of an inch, and their usual form that of a flattened, circular disc; but they vary both in form and size.\* During the life of the pig, the bladder enclosing the worm is fully distended with a pellucid fluid, but after the pig's death, a portion or all, of the contained fluid escapes into the surrounding tissues.

"In the specimen of cured pork sent to us, the bladders were empty of fluid, and the microscopic corpuscles in the body of the worm presented a central granular opacity, instead of being clear and transparent, as in the fresh specimens. *We believe that the life of the parasite is destroyed by the process of curing.*

"It is now maintained by several eminent physiologists, that this fleshworm is the *scolex* or imperfect condition of the tapeworm or *Tænia solium*, and that when passed alive into the intestinal canal of man and other mammalia, it assumes there a higher degree of development, and becomes a tapeworm—a troublesome parasite—often causing distressing symptoms, and impairing the health. The organization of the fleshworm, as now described, goes far to establish this opinion, if, indeed, it be not already placed beyond doubt by the results of experiments in which it was shown that dogs fed on fresh measly pork became affected with tapeworm. With us the parasite is killed by cooking, but where the flesh is eaten raw, as in Abyssinia, tapeworm is very common.

"*All pork is not measly.*—In the specimens of healthy pork we found no trace whatever of the parasite in any stage of development.

"In the specimens of both slight and badly measled pork submitted to us, the worms were all visible to the naked eye. All appeared to have reached the same degree of organic growth, and in none of the specimens, healthy or otherwise, could we find eggs or the slightest trace of the parasite in an earlier stage of development.

"This parasite has been found in the muscle, brain and eye of man; but *there is no analogy whatever between measles in the pig, and the disease known by that name in man.*

"It is highly probable if not quite established, that measles originate in the eggs of the tapeworm which infests the bowels of the dog. Each mature joint of the last parasite contains many thousand eggs. These, when voided by the dog, are resolved into a fine dust, and are scattered by the wind, and thus, mixing with the food or drink of the pig, enter its body, and are there converted into the measle or fleshworm, which, as already stated, is an imperfect condition of the tapeworm. Measles may not form in every hog that has swallowed tapeworm eggs; while a feeble digestion and constitutional debility may especially favor their hatching in some pigs.

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\* These cellules were erroneously regarded as eggs by Klencke and Gulliver,

“If this view of the origin of measles be correct, it will be an important and rational guide to the prevention of the disease, and which will consist in *providing the pig with thoroughly clean food and drink, promoting its general health, and removing it from the neighborhood of dogs affected with tapeworm.*

“When only a few of the parasites are scattered in the body of the pig, the flesh does not differ from that of healthy pork in its ordinary character or minute structure, and the general health of the pig is not affected. When used as food, it must be so rare that the vitality of the worm can escape cooking, mastication and digestion, that we believe the risk of tapeworm from its employment to be very small; and on the whole, *we see no valid reason for regarding slightly measlesd pork as unwholesome*; but it must be well cooked, and never eaten raw or undone.\*

“On the other hand when the parasite is thickly distributed throughout the muscle, the flesh is pale, soft and watery, and the muscular fibre near the worm loses its healthy structure, and exhibits evidence of the condition known to pathologists as fatty degeneration. The health of the pig is much impaired, and in the worse forms of the affection we may have inflammation and suppuration in one or more parts of the body, with general fever, wasting and weakness. The pig is seldom permitted to see this stage, and almost never to survive it.

“When the disease proves fatal, according to Mr. Martin, the animal loses appetite, blisters form under the swollen tongue, the skin ulcerates, and death occurs amidst extreme debility and emaciation.†

“Badly measlesd pork is insipid when cooked, and in boiling loses more weight than healthy pork. It is more difficult to dry, and exhibits greater proneness to putrescence;‡ while, respecting its use as food, we must not forget the possibility of its causing tapeworm, nor the risk of some portion of the animal having undergone during life changes of a truly morbid nature, as inflammation and suppuration. Taking account of all these circumstances, we cannot regard bad measly pork, fresh or cured, as wholesome food for man.

“This opinion may be assailed on the ground that bad measly pork is consumed to a large extent, and that no hurtful effects have been traced to its employment. But we cannot trust to common experience in a question of this nature. Putting aside the ordinary sources of fallacy, the poor consumer of such meat is rarely capable of tracing the relation of cause and effect between bad food and its evil consequences. He would conclude meat to be wholesome which failed to produce some striking bad symptoms soon after a meal, and would be unable to refer to its true cause the injurious

\* The process of curing is fatal to the parasite, and removes all risk of tapeworm.

† Farmer's Library, vol. ii. p. 491.

‡ These facts were determined by repeated comparative observations with healthy pork.

influence, slowly and silently, but not less certainly, wrought upon his system by the long continued use of an unwholesome article of diet.

"Chemical analysis could not aid much in this inquiry, but were it otherwise, the time allowed us did not permit of its employment."

The measle in the hog is more observed in Cork than elsewhere in these islands. This is in part due to its being more carefully sought for; but chiefly to its greater frequency, caused, I apprehend by inattention to the cleanliness of the pig's food and drink, and by the circumstance of its being reared in the peasant's cabin, where it has very generally a dog (untaxed in Ireland) for a companion. This dog for the most part, has tapeworm. Nor must we forget the influence of our low marshy grounds and warm humid climate, in favoring the production of parasites, and especially of worms. These conditions may induce a state of constitution in the pig favorable to the reception of the parasite, and we can readily understand that a warm and moist air should favor the incubation of the tapeworm egg and development of the young *tænia* outside the body.

I am informed that in Cincinnati, the largest pork market in the States, the measle is unknown. If this be the fact it would be interesting to know whether the pigs brought to that city, and which are fed chiefly in the forests of Ohio, Kentucky, and West Virginia, are kept apart from dogs having tapeworm. Perhaps some of our American readers could inform us on this point. Dr. Wood, of Philadelphia, says that tapeworm is comparatively rare in the natives of the Union.

The researches of Küchenmeister, Röhl, Leuckart, Von Siebold, and Van Beneden, leave no doubt of the connexion between the cystic and cestoid entozoa. Experiment shows that the measle is generated in the muscle of the pig by feeding it with ripe joints of the dog's tapeworm (the *Tænia serrata*, now considered to be the same as the *Tænia solium*, or human tapeworm,) and that the same tapeworm is developed in the intestines of a dog fed with fresh measly pork. The measle is not generated in the dog by feeding it with the tapeworm eggs.

Leuckart has traced in the rabbit the passage of the embryo tapeworm into the blood vessels. The eggs are quickly hatched in the stomach, and the young *tænia* bore their way with their lancet-armed heads through the mucous membrane, into a blood vessel. With the blood they are carried in the rabbit to the liver, to be there arrested and developed into hydatids or Cysticerci. In the lamb, the young *tænia* are carried with the blood to the brain, where they fix and grow into the cystic parasite named *Cœnurus cerebralis*, and within two weeks of the commencement of the experiment the lamb is affected with the "staggers."

The cystic entozoa or hydatids do not form a separate class of parasites, but are merely the cestoid entozoa or intestinal worms in an imperfect state. Each species of tapeworm has its correspond-



ing cystworm, but the same embryo tapeworm may produce ~~two~~ or three forms of hydatid, according to the species of animal and part of the body in which it may chance—or rather, I should say, mischance—to be developed, for the hydatid is essentially abnormal both in form and site, and these entozoa obtain their perfect growth only in the intestinal canal—their proper dwelling place. The young tapeworm, swimming in the blood, is fixed probably by getting into a capillary too small for its passage; and the reason of its being arrested by preference in the muscle of the pig, brain of the sheep, and the liver of the rabbit, may perhaps be found in the relatively small size of their capillaries.

As the egg of the same tapeworm develops both the measles in the pig and the staggers in the sheep, the means of prevention suggested in the Report, for the former disease, will apply equally to the latter.\* In addition to the means of prevention there mentioned, it might be well to reduce the number of dogs in the country, and to diminish the frequency of tapeworm among them by not feeding the healthy with raw flesh, and by the vigorous treatment of the diseased. The excrement of dogs should not be mixed with the manure for pasture fields.

There is more hope of preventing measles than of their cure. I made many inquiries as to the treatment of the disease, but without obtaining information of much value. The farmers generally are skeptical as to cures being ever obtained, but a few have faith in treatment; and, of the several remedies employed, the internal use of sulphur is most relied on. Two or three cases were mentioned to me by trustworthy persons in which cures appeared to have been made by this drug. It is probably converted in the pig's body into sulphurous acid, and poisons the measles. This acid is a most efficient parasite-killer. Alcohol, iodine, camphor, turpentine, and nitrate of silver, are actively poisonous to the cystic parasites, and their internal use may be tried.

In Cork the pig is examined for measles by official persons, both in the living and the dead markets. The parasite shows itself at a very early stage of the disease in the tongue, and this organ is inspected in the living market. The pig is placed on its side and the mouth opened. The tongue is then drawn forward and pressed firmly between the fingers in its whole length. The measles if present, is felt by the finger, and withdrawn through a scratch in the mucous membrane. If none are felt, the pig is passed as healthy. This test is the best known, and is very useful, but the worm may be absent from the tongue and present elsewhere in the body; and a more certain means of detecting the disease in the living animal is to be desired.

In the wholesale dead market, the inspection is made by making

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\* According to Küchenmeister, the hydatid of the sheep's brain, causing staggers, is produced from the embryo of a peculiar tapeworm, named *Tenia caninus*, also found in the bowels of the dog.

a free cut lengthways into the inner loin muscle at the side of the spine, and by cutting across the neck. And, should the purchaser desire it, cuts are made into the flesh elsewhere, as the back of the neck and shoulder. If one measle only is found, the price is lowered 5s. per cwt., and if more are seen, a larger reduction is made, varying in amount according to the number. The worse forms are not sold in this market.

The origin of tapeworm in man from the measle was rendered probable by the greater frequency of the disease among the consumers of raw flesh, and particularly of raw pork, as the Abyssinians, the natives of Nordhausen, and the operatives of Lancashire; but Küchenmeister has given a high degree of certainty to the connection by experiment. He fed a condemned person with measles, and found tapeworms in his body after execution. The parasites were given during the three days before death, in five doses of about a dozen each time, disguised in soup. Ten young tapeworms were found in the intestinal canal, attached to the mucous membrane in the usual way.

The process of curing destroys, as we have shown, the vitality of the parasite, and to this circumstance the immunity from tapeworm, enjoyed by the inhabitants of Cork, must be attributed. The poor of this city, among whom tapeworm is very rare, undoubtedly consume a large quantity of measly pork, but always salted. The freedom of seamen in the navy from tapeworm admits of the same explanation. Much of the pork formerly used in the navy was measly, but it was well cured. At the present time, the naval contracts are inspected with care, and measly pork is rejected.\*

The use of raw, measly flesh, cannot, however, be the only source of tapeworm in man. This parasite occurs among the very poor who scarcely eat flesh of any kind, and it plagues the Hindoo, who lives almost exclusively on rice. It may, perhaps, originate from the direct introduction of the tapeworm eggs or young *tænia* with the food or drink into the stomach. Klencke, many years ago, asserted that he had found microscopic young *tænia* in ditch-water, and the frequency of tapeworm in Vienna has been attributed to the water of that city, in which young tapeworms have been detected.

Why, when thus introduced into the stomach of man, the dog, pig and sheep, respectively, they should cause tapeworm in the first and second, and pass into the blood of the third and fourth to grow cyst-worms, may be explained by supposing that in the carnivore's stomach the mucous membrane is tougher, or that the young *tænia* are dissolved by the strong acid, gastric juice, except on rare occasions, when they slip alive into the intestines to grow tapeworms; while

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\* While engaged in this inquiry, my friend, Dr. John Burns, of H. M. S. Hastings, communicated with several of his brother medical officers to learn their experience of the use of measly pork in the navy. Tapeworm had not been traced to its employment. During the summer of 1855, Dr. Burns states that the provisions issued were uniformly of good quality.

in the herbivorous\* stomach, where the food lies long, they escape digestion, the gastric fluid acting feebly on animal matter, and, piercing the softer mucous coat, make their way into the circulation.

These remarks have brought me to difficult, and as yet obscure ground, and, in truth, although great progress has been made of late years in our knowledge of intestinal worms, much remains to be done as well for their natural history as for those important questions in hygiene and pathology to which they give rise, before we can attain to clear views and definite conclusions.—[*New Orleans Med. News and Gazettee.*

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*Abstracts of Reports of Hospitals, Dispensaries, &c., in Austria.*

On the 30th December, 1856, Dr. A. E. Flechner gave in his report to the Medical Association of Vienna, upon the monthly and annual Sanitary Reports of the different Hospitals, Alms Houses, Dispensaries, Penal Institutions, Asylums, &c., of Austria for the past year. The number received and examined exceeded two hundred, and embrace results from September, 1855, to October, 1856.

The following facts and items, gleaned by Dr. Flechner in his examination of these Reports, and interesting in their therapeutic and pathological relations, we translate from the *Österreichische Zeitschrift für Practische Heilkunde*.

It appears from the monthly reports of General Hospitals, that, in traumatic tetanus wine was administered with favorable results, accompanied at the same time by the use of carbonate of potash baths, followed by early use of opium and carbonate of potash. The autopsy, in a severe case of tetanus of ten days duration, disclosed in the body no material pathological change. A case of chronic lead poisoning, accompanied with violent headache, and complicated with paralysis, was cured after nineteen days use of four drops daily of *chlorbrom* in two ounces of water. Diabetes melitus was treated successfully by strict flesh diet, iron, tannin, and carbonic acid water. Tannin was of no avail in intermittents; on the other hand, berberin was employed with advantage in non-gastric diarrhæas. Glycerine did good service in bed-sores. A caustic agent, much esteemed in France, was experimentally tried with good results, viz: one part of pure liquor ammoniæ to two parts of oil. Poured upon cotton and laid upon the skin, lentil-sized blisters were raised in five minutes, which, being pricked, were sprinkled with morphia. Iodide of potassium repeatedly proved itself useful in cases of mercurial poisoning, and croton oil in cases of lumbago and sciatica, externally applied. Upon trial of Fleming's method for the itch, less favorable results were obtained than by that usually

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\* *Cysticerci* infest the flesh of several vegetable feeders, as the ox, deer, sheep, hare, rabbit and mouse.

employed in General Hospitals. Favorable results follow the use of strychnia in paraplegia, and cantharides in incontinence.

Among other things, typhus deposits were found wholly wanting in exanthematous typhus; while on the other hand, in an old apoplexy, with a slow pulse, in the course of which all the usual symptoms of typhus were absent, the body, upon examination, first showed the typhus process. Ulcerations of the larynx were often observed following typhus. A metastatic abscess developed itself in the upper arm of a patient convalescing from severe typhus, which being opened, showed a healthy disposition, but suddenly chills occurred, icterus, with pain in the liver, and very soon death. Upon examination of the body, the liver showed numerous abscesses of the size of a walnut. A fungus melanodes, appearing externally at first, in eighteen months extended inwardly, and invaded most of the internal organs. Melanotic formations were found in the pleura, peritoneum, and even in the muscular tissue. An apparently hysterical patient died with comatose symptoms, and the body showed, upon examination, melanotic degenerations in both hemispheres of the brain, as well as in the right lung, and several formations of the same kind in the omentum and mesentery. In an epileptic, whose paroxysms were accompanied by violent vomiting and diarrhœa, sixty hydatids were found, of the size of grapes, in the cortical substance of the hemispheres of the brain, and one in the right corpus striatum. A tubercle of the size of a hazelnut was found in the right hemisphere of the cerebrum, the patient having exhibited no cephalic symptoms of disease during life. Fatal cases of puerperal fever, accompanied with icterus, left no traces of any affection of the liver. Union of the pia mater with the substance of the brain resulted in epileptic convulsions, loss of memory, and finally death; hypertrophy of the cerebrum was accompanied with loss of the sense of smell and taste, while that of sight was little disturbed. Cancer and tubercle were found together in the same individual. These two diseases are therefore considered not incompatible. Fatty liver and fatty spleen were found following secondary syphilis. An evidently increasing frequency was observed in reference to the last.

We select a few of the numerous observations made at the Wieden District Hospital, and interesting among these was a case diagnosticated as phrenic neuritis, which, with extremely violent and painful hiccough, sensitiveness of the epigastrium, and pain in the points of attachment of the diaphragm, appeared in a young man, twenty years old, of good constitution, who had twice before suffered from the same affection, but of a milder form. Sulphate of quinine, in doses of five grains, morning and night, was exhibited with the most favorable results. The attacks, which at first seldom ceased longer than a few minutes, became from day to day milder and rarer. They wholly disappeared on the sixth day of treatment. Ulcerations of the larynx sometimes followed typhus; once, also, there was observed an extensive crop in the summit and posterior

walls of the throat, and posterior nasal fossæ. During the cholera epidemic typhus cases ran their course with intermitting paroxysms. In one case, cystitis developed itself after cholera, followed by an extensive furuncular eruption, and death from exhaustion. A stubborn tertian, the paroxysms of which were accompanied by vomiting and diarrhœa, and which had been battled in vain for two weeks, at home, was cured in the Hospital by the use of corresponding doses of quinine and opium. A case of Bright's disease terminated with symptoms of cholera. In the body were found hæmorrhagic ulcerations of the stomach, and a pleuritic exudation. A drunkard lived twelve days after an apoplectic attack, although a clot of the size of one's fist was found in his brain after death. Veratria in increasing doses was successfully employed in facial neuralgia.

The reports of the Lying in and Foundling Hospitals, including those of institutions for vaccination, deserve every acknowledgment. We here also make but a few selections, since the most important results, aside from these, are published in the yearly report. An accurate preliminary investigation into the etiology of the puerperal processes, in the first named, would be desirable, since with some fluctuations in regard to the number of cases, they disappeared entirely at no time during the year. Not less desirable would be an accurate account of their course and treatment. The lying-in wards differed strikingly in regard to the frequency of puerperal fever. The Foundling Hospitals number always, of out door and in-door patients, about 15,000, of which from 450 to 500 die monthly. The great mortality of the in-patients arises principally from anæmia, diarrhœa and pneumonia. The frequently prevalent ophthalmia neonatorum is now successfully treated by applications of pounded ice; in its further progress by solutions of lapis divinus and sulphate of zinc; and in ulcerative conditions by solutions of corrosive sublimate and tr. opii. The not uncommon cancrum oris of children was treated by muriatic acid washes for the mouth, slices of lemon, and by touching the gangrenous spots with tr. opii.; and, indeed, with better success than by glycerine, which has been recommended and employed in Children's Hospitals, in this affection. The experiments made during the course of the year, with original vaccine lymph, were twice successful, but the development of the vaccine matter so procured is always slower.

In the report of the Royal Asylum for the Insane are given items of etiological interest, and also pathological results in a field hitherto truly barren. The prevailing type of disease is mentioned for each month, and several prominent cases of disease are accurately described. In reference to the former, the abuse of alcoholic drinks, whereby, through impregnation of the nervous centres by aldehyde, arise hallucinations of sight and hearing, furthermore, sexual excesses, and finally, in women, menstruation and lactation, as well as climacteric periods of life, all play important parts. Post-mortem

examinations frequently disclosed chronic hydrocephalus; atrophy of the brain; more or less extensive softening, especially in dementia; then hardening of the brain, and finally loss of elasticity and ossification of the arteries and malformations of the heart. It is remarkable how other diseases are sometimes obscured by insanity; for instance, in a case of cholera, where in life the usual symptoms of vomiting and diarrhoea were not developed, and yet the body plainly showed the cause of death to have been this disease. In two other cases, during the course of the cholera, there was observed a striking improvement in mental activity; and in one case of a teacher, twenty-six years old, the mental disease completely ceased upon the development of pulmonary tuberculosis. In a similar way, a previously existing epilepsy wholly ceased with development of pulmonary tuberculosis. Aside from other intermittent forms of mental disease there was observed, following a case of cholera-typhus, a periodically returning mania of a monthly type; and in the case of a woman, already for the third time pregnant, melancholy and a suicidal propensity were noticed each time in the sixth month of her pregnancy. A wet nurse became insane through anæmia, from nursing three children at the same time. In the case of an insane patient refusing food, instead of using the usual feeding tube, nourishment in a liquid form was sought to be introduced through the nose by the aid of a spoon only. It did not, however, succeed.

Rich in materials, also, are the reports of the Elizabethinerinnen Infirmary, since in addition to the prevailing type of disease, its course and treatment, they contain accounts of prominent cases. General and local blood-letting was employed in this institution in the graver inflammatory diseases more frequently than in other hospitals, and indeed with very average satisfactory results. At the Wahringergasse House of Refuge, in Vienna, the more stimulating method in the treatment of cholera, by the use of camphor, sweet spirits of nitre, and tincture of juniper, was found far more beneficial than opium and other remedies. A periodically recurring cholera was here observed.

In the reports of three Penitentiaries which came to hand, scorbutus forms a subject worthy of especial attention. The remark of the physician of these institutions, Dr. Lunzer, appears to us deserving of much consideration. Reported observations have taught him that when scorbutus accompanies tuberculosis, pulmonary affections, and especially the symptoms of tuberculosis, recede; furthermore, that scorbutus does not appear so severely in an individual having tuberculosis, as in one previously healthy; and that not rarely after the cure of the scorbutus in such cases, the tuberculosis appears to be cured. Hence scorbutus is good as a curative measure in tuberculosis—a proposition which needs for its acceptance further unbiassed observations. In connection with the Penitentiary Hospital was mentioned a case of extremely ichorous eczema, which,

having withstood for a month the use of a soap of glycerine and carbonate of potash and lunar caustic, finally yielded completely through a month's continuous use of collodion.

Only five reports were given in upon epidemics prevailing in Austria, outside Vienna, during the course of the year, of which four were upon scarlatina and one typhus.

The first of the scarlatina epidemics appeared at Himburg, in the fall of 1855. There were 32 cases and 3 deaths of girls; no boys died. Two of the fatal cases terminated in the first stage from convulsions, and the other upon supervening anasarca. The source of the disease could not be established, since no scarlatina was present in all the neighborhood.

The second occurred in the four cantons of the Hangsdorfer district in the last month of 1855, and lasted until the 20th of February, 1856. There were 277 cases and 43 deaths. Many milder cases, however, did not come under the notice of the physicians. The fatal cases were also most numerous among girls. Death was caused by inflammation of the internal organs, especially the membranes of the brain, then through inflammatory discharges from the ears, and finally through anasarca. It is worthy of mention that scarlatina patients lying in the same room with cholera patients, were never attacked by cholera. The march of the epidemic in the four cantons was plainly from East to West. Its origin was not known, and its spread was not always ascertained to have been through contagion. Belladonna was shown to be useless as a prophylactic, and the results from rubbing the body with fat bacon appeared problematical.

The third epidemic of scarlet fever appeared at Mannersdorf, in the district of Bruck, on the Leitha, and lasted from April to July, 1856. Out of 69 cases 11 died, a part through angina crouposa, and a part from pneumonia and atrophy of the brain. The sick were most numerous at the beginning and end of the epidemic. There occurred also cases without the rash, followed by desquamation of the cuticle and anasaren. Among the sequelæ were observed ulcerations of the mouth, and discharges from the ears. Tepid baths were found beneficial in cases showing albuminuria.

The fourth epidemic appeared at Hainburg and Hundsheim, lasting in the first from the end of April to August, 1856, and furnishing 96 cases, of which 26 were fatal.—and in the second 24 cases, of which 5 were fatal. The mortality among girls was also in this epidemic greater than among boys. Suppurations of the glands of the neck, ulceration of the mouth and tongue, discharges from the ears, and ophthalmias accompanied and followed the disease. Belladonna was useless as a prophylactic in this epidemic.

The remaining report upon the fifth epidemic, that of typhus, at Zistersdorf, presents nothing specially worthy of mention.—[*American Medical Monthly*.

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*Lecture on Chronic Orchitis.* By Professor NELATON. Translated from the Gazette des Hop.iaux, (Paris.)

The patient who occupies bed No. 27 in the male ward, is affected with a long standing and chronic disease of the testicle. On account of the obscure phenomena attending this case, it presents many points which render the diagnosis somewhat obscure.

By reviewing the symptoms which characterize the different diseases of the testis, this case will appear to be curious in itself, as illustrating one of the rarest and least known of these affections, viz: chronic engorgement of the testis.

The patient is aged twenty-six years; he appears to be powerfully made: in fact, his profession, that of a mountebank, requires considerable strength; for his principal feat consists in ascending an incline plane on a large ball weighing twenty-five or thirty pounds.

About four years ago he contracted a gonorrheal affection, and we here mention it in order that it may be taken into account with the other attending circumstances. The gonorrhea lasted about four weeks, and was followed by inflammation of the epididymis. Since this time the testicle has remained much larger than before, and the patient, though not again affected with gonorrhea has, nevertheless, constantly felt some pain in urinating: afterwards, this pain was greatly increased, and several times the act of micturition was followed by a few drops of blood. About a month ago, an external injury was superadded to the previously existing disease. It appears that in the establishment to which he belongs, some animals are also exhibited. While attending on an Ostrich, he received a severe kick from this bird in the hypogastric region. Now a kick from such an animal would certainly give rise to severe accidents, and the patient attributes to this cause an exacerbation of his disease. He adds that about a year ago, he fell and injured his scrotum. All of this must be taken into consideration when considering the nature of such an obscure organic affection; that it is obscure will appear from a description of the diseased part.

The right testis, which is the only one affected, has increased in size, but not very materially, being about the size of a hen egg. On first examination it appears smooth, but when carefully felt, it can be readily found to be somewhat irregular in shape. Nor is its consistency perfectly uniform, being hard in some points, and soft in others, but the limit between these two conditions is not distinctly marked, and the most careful investigation does not reveal any specific point of engorgement. Both in the epididymis and in the testicle itself, these indurated places can be felt. In front, the body of the organ presents a well marked fluctuating point, which appears to be owing to a fissure in the tunica vaginalis. The spermatic cord retains its natural consistency, and is not



at all infiltrated or enlarged. The sensibility of the testis is greatly increased, and the slightest compression produces great pain.

Now, what can be the nature of an engorgement which has lasted three years and a half? This is certainly not the ordinary course of gonorrhœal orchitis. There is no doubt that this species of orchitis existed at the beginning, but it cannot be maintained that it could have persisted all this time.

Perhaps this might be a case of hypertrophy of the testis: for the symptoms of the latter have some analogy to those which are presented by this case. But we must remember that hypertrophy of the testis generally affects both sides at once, and moreover, the organ is uniformly increased in size! Besides, hypertrophy of the testis is exceedingly rare in this country. By my researches on the subject, I have ascertained that this affection is seldom, if ever, seen in France, whereas it is very common in the other hemisphere, and especially in South America. By looking over the published records on this subject, we find fifteen cases in that part of the world to one in Europe! Alone, this reason would not be sufficient, but combined with the physical appearances, we must unhesitatingly reject the supposition of hypertrophy of the testis. We must remember again, that the latter disease generally manifests itself in the period of growth, in the transition from youth to manhood.

Could this be a tubercular affection of the testis? Nothing in the examination of this young man, either in his general condition or in the particular diseased part would lead us to adopt this supposition; his robust frame, his herculean strength at once refute the hypothesis, his general health is excellent, he presents no symptoms whatever of the tuberculous diathesis, neither the cough nor the expectoration, no sign whatever. Look at the life which he leads, marked by excesses of every kind, yet he bears it all very well. If it were not for the pain and difficulty in urinating, his disease would not affect him in the least. The local appearance of the organ is also very different from that presented by the tuberculous testis. The latter disease affects two forms which are entirely distinct: The tuberculous deposits are either, 1st. Accumulated in isolated masses of a certain size, and situated in different parts of the organ; or, 2d. Of miliary granulations in the substance of the organ: these granulations of about the size of a pin head, accumulate in enormous quantities, and by their increase may gradually give to the organ an exaggerated volume.

Could we have here either of these varieties? We can at once reject the latter form: for this kind of tuberculous testis generally develops itself with extreme rapidity, like galloping consumption, which is also characterized by the appearance of innumerable quantities of tubercles in the miliary state.

This rapid and abundant growth of tubercles is very rare, but when it does happen, it is very apt to mislead the observer. It

will generally be taken for a case of acute orchitis, and some days may elapse before it assumes its distinguishing characteristics. But in this case the engorgement has lasted three years and a half—so that this form of tuberculous degeneration is entirely out of question. Could it be the first variety? Certainly not! For when we meet those large turburcular masses in the testis the health of the patient is generally far from good; and it is very rare to see persons subject to this disease having such a good constitution, or retain the physical appearance of this man. Moreover, these tuberculous masses would not remain three years and a half without softening, suppuration and ulceration. For these reasons we cannot hesitate to reject the idea of a tuberculous affection, in the same way that we eliminated the blennorrhagic cause and hypertrophy of the testis.

We have still three alternatives left.

It could be either a syphilitic affection, or an encephaloid tumor or chronic orchitis. Let us now examine these different morbid species.

In the first place would it be possible for this to be a syphilitic manifestation? It does not present the symptoms of the syphilitic testis.

In those tertiary forms of venereal disease which affect the testis there is generally some effusion in the tunica vaginalis; in fact, the universality of the presence of liquor is such as to amount to a law! Moreover, when the testis is examined, either with the liquid when the effusion is not too great, or after puncturing, if the quantity of liquid require this step; then it will be ascertained that the surface of the testis is rough and uneven on account of numerous small elevations about the size of a grain of wheat, which are deposited all over the surface of the tunica albuginea. And then the testis presents that shape which is characteristic of the venereal affection; the testis being completely surrounded and overlapped by the epididymis, something like an egg-cup, or an acorn in its cupula! But in this case we have none of these symptoms, neither hydrocele, nor uneven surface, nor enlargement of the epididymis. And, moreover, it is extremely rare to see a syphilitic affection remain confined to one testis during this space of time; for generally after four, six or eight months, at the farthest, the other testicle will become affected in the same way. There is another sign which is very important. You will observe that in the testicular form of syphilitic testis, this gland loses its peculiar sensibility; and the patient can bear an amount of compression which in the healthy state would be utterly impossible. In fact, you would be astonished at the degree of compression which can be exercised on the gland without giving the patient any uneasiness. But here we have seen the sensibility of the diseased organ is greatly exaggerated. The man himself says he has never had any venereal symptoms, either primary or secondary, and this is certainly

not a tertiary manifestation. Not that we should put any great faith in these assertions on the part of patients as a general thing, but when they confirm the results of analytical investigation, it is well to give them some little weight in the pathological scale. We can therefore affirm that this is not a venereal affection.

Is it a cancerous degeneration? This is certain possible at first sight. But this disease generally progresses with exceeding rapidity. An encephaloid tumor, will, in three or four months, attain four times the size which this case has reached. This fact alone, should make us reject the supposition of an encephaloid affection! Moreover, these tumors are more uneven and nodulated than the present case, and are often accompanied by thickening of the cord with engorgement of the neighboring lymphatics. We now come to the last supposition.

Is this a case of chronic orchitis? And first, what is chronic orchitis? This is one of the most obscure questions in pathology, and on which the latest writers still leave many doubts and discrepancies. Look at Curling's treatise on the Testis, and you will find that what he describes as chronic orchitis, is nothing more than a tuberculous disease of that organ. The principal anatomical character of this form of inflammation, says he, is the deposition of a peculiar yellowish product, homogeneous in appearance and devoid of any organic element. He describes two forms which this abnormal product affects, and these are nothing more than the two varieties which we described above as appertaining to the tuberculous affection. He discusses the primitive seat of this disease, and concludes that it originates in the tubuli seminiferi. He adds that in one case where he excised the diseased organ, the epididymis was also considerably affected, that the globus major was filled with a soft though concrete mass, filling an irregular sinus into which opened a fistulous communication. The globus minor contained a similar deposit, but without external opening. He has, moreover, illustrated his description, by a good engraving. The author himself, foresees the objections which might be raised, and says that this is not tuberculous matter, but something entirely different! He admits that the term of yellow tuberculous deposit has been applied to this disease, but he condemns the term because it is apt to mislead one as to the true nature of this affection. But with all this, his description of the case is a faithful picture of the tuberculous affection of the testis; for he speaks of the diseased organ of the softening of the tuberculous matters retaining, though he reprobates the expression; he describes the fistulous communications which are so characteristic of this disease, and also the adhesions which take place between the testis and the scrotum.

Unfortunately Curling has not confined his description to the tuberculous affection of the testis; he has mixed up with it the symptoms of the testicular venereal affection, viz: the syphilitic

testis. Thus he speaks of loss of sensibility in the organ, and effusion in the tunica vaginalis.

But this is not all—he also combines with it a description of what has generally been designated under the name of fungus of the testis, this being an affection in which the inflammatory process causes the rupture of the tunica albuginea, and consequently protrusion of the vasa semiferri; the vegetation which thus takes place externally producing the fungoid growth. So that in his description we find a little of every thing: tuberculosis, syphilitic testis and fungus of the same organ, all of which, certainly tend to obscure the question instead of elucidating the subject matter. Thus it is that in all which has been written on chronic orchitis, there is much confusion, and nothing characteristic of the disease. Nevertheless, I still believe in the existence of this disease, though, it is undoubtedly very rare. In these cases the testicle becomes inflamed, and an exudation of plastic lymph takes place, quite different from tuberculous degeneration. This infiltration deposit may be absorbed without suppuration, but on the other hand it may continue during a considerable time, as we see in inflammation of the epididymis, and then the whole organ continues in a state of permanent engorgement.

I think that the case under consideration is an example of this kind. The inflammatory action has been kept up in the testicle by the irritation of the urethra, and this state has finally brought on the chronic engorgement of the gland which is cognizable by the touch.

In relation with this subject, a single fact has been observed among those patients who are affected with this disease. The spermatic secretion is sometimes altered in its physical properties; it assumes a reddish or roseate hue, resembling gooseberry jelly. This circumstance being somewhat curious, I have attentively observed some of these patients, in order to see the result of the disease; I have been thereby enabled to ascertain that the change of color in the spermatic secretion may continue during three or four months without preventing sexual intercourse; then it gradually disappears, and the sperm resumes its normal appearance. Nor does this change affect their virile powers, for some patients who did not renounce their marital rights, have begotten children while their seminal fluid presented this abnormal condition. It has been said that children begotten under those circumstances generally present some peculiarities, such as red marks on the skin, etc. But these are idle stories entirely devoid of foundation. I have made some investigation in order to ascertain if this circumstance has been observed by other writers, and I found that Sweidour met with some patients who presented this peculiarity, and they were much frightened by the circumstance.

What is the treatment to be followed in this case? The first indication is to remove the cause of engorgement, viz: inflamma-

tion of the urethra. There does not appear to be any stricture, only a little pain in micturition. The bladder is not much affected, the urine presents no abnormal deposits.

Leeches have been applied to the perineum in order to diminish the local engorgement; we have also given him tepid baths to be repeated daily. After that, the treatment should be continued by revulsive applications, and among these the Tartar Emetic ointment is to be preferred to Cantharides, for the latter might act on the bladder, and produce inflammation of that organ.

We can very confidently expect that this course of treatment will relieve the inflammation of the urethra, and consequently the chronic irritation of the testicle which is dependant upon it.—[*New Orleans Med. News and Gaz.*

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*Upon the Use of Glycerine as a Topical Therapeutical Agent.* By M. LUTON. From the Comptes Rendus de la Société de Biologie.

Glycerine is an unctuous liquid not susceptible of evaporation. Although it has the appearance of an oil, it has the physical characteristics of a syrup; it is also soluble in water. By its first two properties, it prevents, as well as cerate and other fatty substances, the dressings from adhering to wounds. By its solubility in water, an extremely important quality, it permits wounds to be kept clean without the necessity of washing them a great deal. Indeed wounds dressed with glycerine, never have those crusts of pus and cerate formed over them, which can only be raised by means of a spatula, and with pain to the patient. It is ascertained, too, by observation that it is seldom necessary to wash the wound, all that is needed is to cleanse it gently by means of a sponge.

We shall see that glycerine evidently modifies the abundance of the suppuration, and again, being a very hygometrical substance, it keeps the parts in a constant state of humidity and prevents the products of exudation from becoming dry and hard. To obtain this it is indispensable to employ the glycerine in abundance, and to saturate the charpie and the perforated linen with it, while in order to avoid the inconvenience arising from the use of the cerate, when the latter is used, the dressings are hardly covered by it.

It is asked if glycerine preserves wounds from the contact of air as well as fatty bodies. The action of fatty bodies in this relation, is very imperfect; they cannot cover a bloody surface. Glycerine, on the contrary, from the quality the reverse of this, comes more directly in contact with the denuded part. It protects it against the air as well as a wet cloth or a cataplasm. It softens the charpie more readily, and is absorbed better, and with it the exuded fluids which it dilutes, and which the cerate under the same circumstances cannot do, for it rather opposes the absorption of the watery fluids.

Fatty bodies, preventing the evaporation of the humors upon the denuded surfaces, or even upon the skin, keep up a high temperature.

Glycerine, from its affinity for water, also arrests evaporation by retaining the exuded liquids, and accomplishes equally well this object. To prove this, it is only necessary to cover the lips cracked by cold, with glycerine; a decided heat is soon felt in them, even when you are in the air, and the pain is greatly relieved.

Glycerine then, from its peculiar physical properties, triumphs over fatty bodies as a dressing of wounds.

But the advantages of glycerine in the dressing of wounds are not thus limited. It possesses, independently of the qualities we have just indicated, a very remarkable topical action, which should seriously interest the surgeon. To show this action, the author points out the different cases in which it has been applied, in the service of M. Demarquay at the St. Louis Hospital, limiting himself simply to announcing generally its salutary effects.

The first effect of the application of glycerine upon a denuded surface is a slight pricking, which sometimes produces an itching sensation, but which soon passes off, and is never complained of by the patient.

In simple ordinary wounds, accidental, or surgical, and exempt from complications, glycerine employed like cerate has no very manifest action. It conducts to a cure quite as rapidly as most of the neutral topical agents, and is only remarkable in its action by the slight suppuration which ensues, which, however, is one of the essential and general qualities of glycerine. Besides it has been observed that it never produces an exuberance of unhealthy granulations.

In the different degrees of burns, glycerine is of extremely easy application, and has also a very efficacious action. We have seen patients upon whom cauterization had been employed for white swelling, sciatica, &c., object to the glycerine dressing because it healed, as they said, too quick, and did not draw enough.

In the diptherite of wounds,—in that bad aspect which wounds sometimes take on in Paris Hospitals during the first few days, dressings with glycerine are of essential service. Instead of assuming and preserving a grayish diptheritic appearance, they look red, and there is no exuberance of granulations.

In Hospital gangrene it proved of most marked benefit in one case following an extensive burn, in which quinine, lemon juice, mono-hydrated nitric acid, and the cautery had failed. It also succeeded in two other cases occurring in the hospital at the same time.

In deep wounds, in sinuous abscesses, glycerine was also used. It was introduced by means of a pledget of lint, or as an injection. The suppuration was diminished and the period of cicatrization shorter. Injections were made into cold abscesses; into abscesses by congestion, and into abscesses in contact with inflamed bones, and the happiest results attended its use.

Glycerine also succeeded admirably in the dressing of ulcers; chronic ulcers, varicose, gangrenous, &c., cleaned rapidly under its influence, the unhealthy granulated surface gradually filled up, and cicatrized. Rest is always a powerful and necessary auxiliary.

Glycerine has no property antagonistic to the specific nature of chancres, but their surfaces rapidly become clean and take on a good aspect from its use, and although there are no positive data to be given upon the specific action in this class of ulcers, yet there is no dressing so convenient for chancres of the prepuce as lint saturated with glycerine.

This topical agent has also been employed in diseases of the neck of the womb. MM. Trousseau and Aran have tried it, but never with very satisfactory results. M. Demarquay has reaped great advantages from its use in simple or granular ulcerations of the neck. In chronic cases, or where the neck was large and tumefied, the different caustics were used, and among others, the cautery. Then the glycerine employed as a dressing, modified essentially the quantity of the secretions, which ordinarily follow the fall of the eschars.

It has also been employed in vaginitis, but the results are so inconclusive that they are not reported.

From this review of its application, it follows that the topical application of glycerine diminishes the abundance of the suppuration. It possesses a styptic influence, difficult to determine, but which by this virtue changes an impure and complicated wound into a simple wound, and consequently hastens its cure.—[*American Med. Monthly.*

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#### Case of Late Dentition.

Dr. Deutsch was called in consultation to a man, 34 years of age, who for some weeks past had been the prey of intense pains in the head and face, the origin of which he had at first attributed to several decayed molars, the crowns of which were destroyed. There was very great swelling of the neck and face, abundant discharge of saliva, and difficulty of deglutition. But the most remarkable thing was the appearance of several new teeth. Thus, somewhat in front of the incisors of the upper jaw, four new incisors were found irregularly disposed, two in like manner presenting themselves in front of the two middle incisions of the lower jaw. New canine teeth also appeared in the upper jaw, between the incisors and the canines. In the lower jaw the new canines sprung up from below and in front of the old ones. The two bicuspid in each jaw and on both sides were pressed backwards by new bicuspid. With respect to the second molars of the upper and under jaw of the right side, and of the upper jaw of the left side, the new teeth appeared in the midst of the decayed molars without displacing these, and in such a manner that the remains of the old toothwalls formed partial envelopes

for the new. No new teeth were found corresponding to the first molars, although the old ones were carious, or to the second molar of the lower jaw of the left side. All the third molars were broken away. All the old teeth were so firmly placed as to be removable only by force. The new teeth were very fine ones. From the time of their appearance the patient's suffering ceased, although the effects of this continued some time to be apparent. A skillful dentist gradually removed all the old teeth, and those of the new which had grown out amidst the old were removed with these latter. Some months afterwards, the new teeth had assumed a very orderly position, the separations between them being very slight. The patient does not remember losing teeth at the usual period of the second dentition. The author adds, that in his own case two molars of the lower jaw, which were extracted in his twenty-fifth year, were in the course of a year replaced by two new, good, and durable teeth.—[*Med. Times and Gaz.*, from *Berlin Med. Zeitung*.]

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*Treatment of Cancer by Dilute Solutions of the Chloride of Zinc.*

The Medical Times and Gazette (April 25, 1857) contains the particulars of some cases in which Mr. Stanley has pursued the plan of treating cancers by much diluted solutions of chloride of zinc. "Their results," says the reporter, "certainly prove that the destruction and enucleation of an ulcerated cancerous tumour may be effected by the use of solutions so weak as to be all but painless, and without necessitating the confinement of the patient to bed for a single day. Without venturing at present to assert that this plan, when persevered in, in a great number of cases in various conditions of health, will be found to be absolutely void of danger, yet most will doubtless admit that the risk attaching to it will prove to be infinitely small, far less than that of excision, and that which attended the use of arsenical pastes. As far as we know, chloride of zinc, when used in its most dilute solutions, never causes deleterious effects from its absorption into the system, nor does its application ever tend to excite erysipelatous inflammation of the part. An operation for the removal of a cancer, involving as it does the exhibition of chloroform, a considerable loss of blood, a period of a week or so in which the patient is feverish and ill, and takes little food, and subsequently a considerable suppuration, must be granted to be likely, even in those cases in which the patients recovered well, not to have exerted any beneficial influence on the subsequent health. And such indeed is but too frequently observed by those who follow up their cases after dismissal. It is not at all uncommon to find patients who have never regained such health as they had prior to the excision, although their recovery from its immediate effects may have been as satisfactory as usual. Without, therefore, saying anything whatever as to the probability of the return of



the disease being greater or less after one or the other method of removal—for as to this we have as yet no facts, and to speculate would be worse than useless—we may safely assert that the plan which Mr. Stanley is trying possesses some very important advantages. Nor is it among the least of these that it may be expected to prove useful in certain cases not well suited for the knife, as, for instance, where the cancer is deeply ulcerated and borders upon important parts. In some regions of the body it will be particularly appropriate for it. On the tongue, in the cheeks, on the lips, etc., it can manifestly be used but very imperfectly, and will probably never supersede the knife; while it may be applied with ease and efficiency to cancers of the breast, or indeed of any well-exposed surface, and particularly to those of the penis or of the extremities.

“While on this subject we may just notice as an additional fact a case in which Mr. Hutchinson has been employing a solution of the strength recommended by Mr. Stanley against a large recurrent fibroid tumour of the uterus. The woman an out-patient at the Metropolitan Free, had been twice operated upon during the past year, but after each the tumour had again appeared and increased with great rapidity. At the time the trial of the solution was made it had grown to the size of an infant’s head, and filled the uterus, projecting a little at the open os. The plan adopted was to pass a small catheter into the middle of its structure, and gradually inject into different parts about two ounces of the solution (one ounce of Sir W. Burnett’s fluid to eight of water.) This was repeated every third day for about three weeks, and had the effect of causing some fragments of the growth to slough and come away. They were, however, of but small size when compared with what remained; and as the tumor went on increasing it was at length desisted from. No ill symptoms had been caused, although a good deal of smarting would generally follow the injections.”—[*Med. News and Library*.]

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*Belladonna in Incontinence of Urine.*

L. B., aged 8 years, was admitted as an out-patient at the Hospital for Sick Children, under the care of Mr. Athol Johnson, in July last, on account of incontinence of urine. This infirmity had existed since birth, and she had frequently been under treatment for it, both in private and at St. Bartholomew’s Hospital, without however, deriving any material benefit. At the time of her admission, the urine was acid, and nothing particular was observed as to its composition. She used to pass it frequently in the day, and usually wetted her bed two or three times during the night. She was treated at first, up to October 29th, with purgatives, alkalies, and blisters to the sacrum, but without any improvement being thereby obtained. It may be observed that there was no worms. At the above date, she was ordered one-eighth of a grain of extract

of belladonna night and morning. On November 22d, it is noted that the child had been doing very well since the use of the belladonna, and that she only passed urine in bed about once in a week. After this, she did not attend regularly; and on February 11th, after an absence of more than a month, she again presented herself in much the same state as at first, the urine being again passed frequently. The belladonna was resumed, and the incontinence again materially checked, especially at night. On February 25th, the quantity of the drug was increased to one-sixth of a grain; and on March 18th, when last seen, she had not passed water in bed since the previous date.

*Remarks.*—This case, though it cannot be said to be perfect, in consequence mainly of the inattention of those who had care of the child, illustrates forcibly the good effect which the use of belladonna unquestionably has, in many cases, of irritability of the bladder. The affection appears to have been congenital; all kinds of other remedies had been adopted without effect, and the improvement following on the administration of belladonna was as marked as the relapse which ensued on the omission of the treatment. It is offered, not as an instance of perfect cure, but as a well marked example of the power of the drug over this particular symptom. No other effect was observed to follow its administration.—[*British Medical Journal*.

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## EDITORIAL AND MISCELLANEOUS.

We here present to our readers the minutes of the 10th Annual Meeting of the American Medical Association, copied from extra sheets of the *Nashville Journal of Medicine and Surgery*, kindly forwarded to us by the Editors. To allow space for our Original and Eclectic departments, we have been constrained to leave out the excellent address of Dr. Pitcher, the retiring President, but hope to give it in a future number.

**SPECIAL REPORTS.—INFANT MORTALITY.**—It will be seen by reference to the proceedings, that an unusual number of special committees have written after them "No report"—"Continued." We may, therefore, expect the next volume of American Transactions to be one of small size, and we do not altogether regret it, as, from the abstracts, read in our hearing, of several of the forthcoming reports, we have every reason to expect that quality will more than compensate for any deficiency in quantity.

The report of D. Meredith Reese, M.D., LL.D., of New York, on the momentous subject of **INFANT MORTALITY**, was decidedly *the report* of our last meeting, and will go far to vindicate the next volume of our Transactions from the charge, made by the British Reviewers, of being "a big

book with nothing in't." Dr. Reese's conclusions are based upon careful statistical observations, and the developments are truly startling. He has examined the subject in all its bearings, from the causes which are inimical embionic as well as extra-uterine infantile existence, and his report, when published, must necessarily awaken attention in a field of observation comparatively new, and heretofore very much neglected. We hope that this report will be given to the profession in a separate form, in order that it may fall in the hands of a greater number, than the readers of the Transactions.

Dr. R. D. Arnold, presented an abstract of a highly creditable report from Dr. J. F. Posey, of Savannah, which we hope to notice more fully hereafter.

**VOLUNTARY CONTRIBUTIONS.**—The report of "A new principle of Diagnosis in dislocations of the shoulder joint," by our colleague, Professor L. A. Dugas, recommended as first among the voluntary contributions, we hope to present shortly to our readers, together with the artistic illustrations furnished in photograph by the reporter to the Association.

### AMERICAN MEDICAL ASSOCIATION.

#### TENTH ANNUAL SESSION.

NASHVILLE, May 5, 1857.

The Association met at 11 o'clock, in the Representative Hall of the State Capitol, the President, Dr. Zina Pitcher, of Michigan, in the chair, and upon his right, Dr. W. K. Bowling, of Tennessee, one of the Vice-Presidents. Dr. Wm. Brodie, of Michigan, and Dr. R. C. Foster, of this city, Secretaries, were present.

The meeting having been duly organized, the first business in order was stated by the chair to be the reception of the report of the Committee of Arrangements.

Dr. C. K. Winston, chairman of the Committee of Arrangements, on behalf of the committee and of the medical profession of the city generally, extended a sincere and cordial welcome to the members of the Association, in a few pertinent and appropriate remarks, as follows:

*Mr. President and Gentlemen of the American Medical Association:*

This, I believe, is the Tenth Annual meeting of this Association. As chairman of the Committee of Arrangements and Reception, I am charged with the agreeable duty of welcoming you to the State of Tennessee and the City of Nashville. I regret that I have not language to express this sentiment with sufficient cordiality. I only add, gentlemen, in common phrase, "You are more than welcome."

You are the representatives of a profession, distinguished alike for its antiquity, its scientific attainments, and its usefulness. It constitutes the true link between science and philanthropy—science and philanthropy, moral, intellectual and physical. You come from every portion of this glorious republic—from the Kennebec to the Rio Grande—from orange groves and golden sands—from mountains clad in eternal snow, and valleys smiling in perpetual verdure. You come not for purposes of self-aggrandizement or personal ambition, nor yet to advance the schemes of parties or stir up the antipathies of sections. "You know no North, no South, no East, no West;" but you come as a company of philanthropists, a band of brethren, that you may pour the acquisitions of another year into a common treasury, kneel side by side at a common altar—and drink the living water as it gushes from a common fountain. You have come to maintain the dignity, to elevate the epaigu of a pro-

ession, to which you have devoted your lives, and to which you have linked your fortunes.

You are the cultivators of a profession eminently progressive, admitting to the fullest extent the spirit and genius of enterprise. So much may not be so fully said of others. Who could expect at this or any other day, to embellish the Commentaries of Blackstone, or improve the pleadings of Chitty, or re-poise the scales of justice? Where are the men with commissions never so divine, who would attempt to re-cast the logic which made Felix tremble, or adorn the doctrines of justification by faith? Who hopes now to shed additional light on the pathway to the skies, or sing in strains more immortal than the triumphs of the cross? Not so with Medicine. Yours is a rising orb—magnificent in its proportions—while others have reached the zenith, yours has but begun to mount the heavens—while others have begun to fade, yours knows no eclipse nor decline. You revere the names of Hippocrates and Sydenham, of Brown and Cullen, with a host of others; you treasure up their maxims, and admire the genius with which they struck out new truths, but you acknowledge no *master*, you fall down at the feet of no *Gamaliel*. You have come to the day of free thought, of free investigation and free speech. You call in question the most hoary, as well as the most recent fact, and you are daily revealing in floods of light, principles hid from the foundation of the world.

You are eminently the students of nature. While others may be led along dubious paths by mortal pedagogues, your teacher dwells in the realms of eternal light, and guides with hand unseen and unerring to essences and first causes. The formative chrystal and germinal dot are alike transparent before you. You are taught the mysteries of the living principle; the scalpel and retort are your companions, while you revel in the wonders of the microscopic world. You understand, somewhat, the laws by which a mote or a mountain is formed, a monad or a man is made. The spear of grass which lifts its head in the distant solitude, the lordly oak and imperial cedar, instruct you, while air, and earth, and sea, with the creeping multitude, yield treasures at your command.

You are the veterans of a thousand battle fields, not of mortal strife where man meets man in sanguinary conflict; but where a secret and impalpable foe—a tyrant who has reigned from Adam till now—disposes his secret forces and directs their deadly shafts. When others have turned back affrighted and aghast, you, single-handed and alone, have met “the pestilence which walketh in darkness,” and the destruction “which wasteth at noonday,” despoiled them of “the armor wherein they trusted,” and have driven them ignominious, from the field.

Were the victories which you have won, the conquests which you have achieved known, you would be crowned with laurels more unfading than those which entwined the brows of Greek or Roman conquerors.

But more and better than all, you are the lovers of your race, the friends of humanity. Scattered about all over this happy land, you emphatically “go about doing good.” Your hearts beat in unison with human woe—your ears are open to the cry of distress, whether it come from hovel or palace—you “wipe away the orphan’s tear and cause the widow’s heart to sing for joy,”—upon your heads daily descend “the blessings of those who were ready to perish.”

To such a body of men thus actuated, thus coming, we extend a cordial welcome. We feel honored by your presence, and expect to be improved and elevated by your intercourse. We throw wide our doors and invite you to the hospitalities of our homes, and to the kinder affections of our hearts.

Dr. Winston then proposed that the roll of delegates, who had registered their names, should be read. The roll having been called, it appeared that twenty States were represented.

Upon the suggestion of Dr. C. K. Winston, our venerable fellow-citizens, Drs. Felix Robertson, John Shelby, and James Overton were made permanent members of the Association.

The following list comprises the names of all delegates, permanent members, and members by invitation in attendance during the session:

*Connecticut*—Charles Hooker.

*New Hampshire*—Adoniram Smalley.

*New York*—James R. Wood, D. M. Reese, Geo. N. Burwell, Alden March, Samuel St. John.

*New Jersey*—Richard M. Cooper.

*Pennsylvania*—R. Dunglison, B. F. Schneck, Casper Wister, P. Cassidy.

*Georgia*—Henry F. Campbell, C. R. Walton, N. F. Powers, A. H. Means, Joseph P. Logan, M. H. Oliver, Thomas S. Powell, J. Gordon Howard, R. D. Arnold, Geo. P., Padelford, Pike Brown, Jesse Boring.

*Alabama*—G. M. Merriwether, W. P. Reese, A. F. Alexander, S. W. Clanton, W. H. Thornton, P. C. Winn, T. Stith Malone, W. J. Bass, G. D. Norris, J. F. Sowell, J. W. Morris.

*Tennessee*—Frank A. Ramsey, James Rodgers, R. O. Currey, B. B. Lenoir, J. L. C. Johnston, J. M. Boyd, Geo. R. Grant, T. A. Atchison, S. S. Mayfield, J. D. Kelley, T. L. Maddin, J. D. Winston, J. E. Manlove, G. A. J. Mayfield, Richard Owen, W. P. Jones, J. P. Ford, Robert C. Foster, Jno. H. Callender, Jno. H. Morton, A. H. Buchanan, James W. Hoyte, N. C. Perkins, J. Berrien Lindsey, C. K. Winston, Paul F. Eve, W. P. Moore, Milo Smith, Wallace Estill, B. W. Avent, H. H. Clayton, H. M. Whitaker, H. B. Malone, T. M. Woodson, A. B. Ewing, Robert Martin, W. K. Bowling, P. S. Woodward, R. F. Evans, Thomas Lipecomb, M. Ransom, J. A. Long, John M. Watson, W. D. Hagyard, Jno. S. Park, D. B. Cliff, T. G. Kennedy, T. R. Jennings, Ira Conwell, J. S. Burford, W. H. Childress, W. A. Cheatham, J. F. Towns, J. M. Brannock, B. C. Jillson, P. W. Davis, G. F. Smith, W. D. Senter, J. W. McNutt, R. G. P. White, J. P. Epperson, S. L. Wharton, T. C. Murrell.

*Louisiana*—S. O. Scruggs, Robert A. New, Cornelius Beard, E. D. Fenner.

*Kentucky*—Samuel Annan, R. W. Gaines, J. B. Flint, J. W. Singleton, R. J. Breckinridge, S. C. Porter, W. S. Chipley, S. M. Bemis, L. G. Ray, W. A. Atchison, E. G. Davis, L. E. Almon, Jno. T. Fleming, C. P. Mattingby, D. W. Yandell.

*Indiana*—W. H. Byford, W. W. Hitt, Isaac Mendenhall, T. Bullard, N. Johnson.

*Illinois*—J. C. H. Hobbs, A. H. Luce, James M. Steel, E. K. Crothers, T. K. Edmiston, W. A. Hillis.

*Missouri*—S. Pollak, E. S. Fraser, Jno. S. Moore, C. A. Pope.

*Michigan*—A. B. Palmer, L. G. Robinson, Zina Pitcher, W. Brodie, L. H. Cobb, M. Gunn, Lewis Davenport, P. Cline, M. D. Stebbins.

*Iowa*—Asa Horr, Wm. Watson, D. L. McGugin, J. C. Hughes.

*Ohio*—Henry F. Koehne, J. M. Moegrove, B. S. Brown, D. Ferris, A. W. Munson.

*Wisconsin*—Hays McKinley, J. K. Bartlett.

*South Carolina*—E. R. Henderson, M. S. Moore, R. W. Gibbes, R. S. Bailey.

*Mississippi*—F. B. Shuford, J. S. Cain, J. T. Lowe.

*Arkansas*—F. Grundy McGavock.

After a customary recess of fifteen minutes, the Association was called to order. The State Delegations then reported their choice respectively of delegates to serve on the Nominating Committee, which was constituted as follows:

Connecticut, Chas. Hooker; New Hampshire, A. Smalley; Indiana, W. W. Hitt; Wisconsin, J. K. Bartlett; New York, Jas. R. Wood; Michigan, A. B. Palmer; Missouri, J. S. Moore; Illinois, T. K. Edmiston; Kentucky, R. J. Breckinridge; Arkansas, F. G. McGavock; Ohio, B. S. Brown; South Carolina, R. W. Gibbes; Alabama, W. P. Reese; Mississippi, F. B. Shuford; New Jersey, R. M. Cooper; Louisiana, S. O. Scruggs; Pennsylvania, P. Cassidy; Georgia, Thomas S. Powell; Tennessee, J. B. Lindsey; Iowa, Asa Horr.

On motion of Dr. Hooker, of Connecticut, it was resolved that the President, Dr. Pitcher, be now requested to deliver his annual address.

[This excellent address we will present to our readers in a future number.]

On motion of Dr. Flint, of Ky., the thanks of the Association were tendered to the President for his very able address, and the same was referred to the Committee on Publication.

The chairman of the Committee of Arrangements announced that the sessions of the Association would be from 9 A. M. to 2 P. M.

Judge Catron, of the U. S. Supreme Court, being present, was invited to a seat on the stand.

The Nominating Committee then retired for the purpose of nominating officers for the ensuing year.

The report of the Committee on Publication being called for, it was read by Dr. Casper Wister, of Pennsylvania, and on motion, was accepted and referred to the committee on publication.

Dr. Wister also read his report as Treasurer, which was received and adopted.

On motion of Dr. Flint, of Ky., Dr. R. T. Fleming, of Ky., was admitted as a member of the Association by invitation.

The committee on Prize Essays being called upon to report, requested further time, because of the late hour at which the essays were handed in, which was granted.

The President informed the Association that Dr. F. Campbell Stewart, of New York, Dr. Alden March, of New York, Dr. Isador Gluck, of New York, and Dr. Pencoast, of Penn., had been appointed to represent this Association in foreign scientific bodies.

The committee on Medical Education was called, but made no report.\*

The committee on Medical Literature was called—no report.

The committee on Medical Topography and Epidemics being called, a communication from Dr. J. C. Watson, of Maine, was read, asking for further time to make a report, which was granted.

Dr. Arnold of Georgia, offered the following resolution, which was adopted:

*Resolved*, That the Committee on Nominations be constituted a standing committee during the present session of the Association, to which shall be referred all business of the Association on which an immediate vote is not required.

Dr. Jas. Mauran, of the committee on Medical Topography and Epidemics for Rhode Island, being called for, the Secretary read his apology, which was accepted.

Dr. Peregrine Wroth, of same committee for Maryland, sent in his report with accompanying reports of Drs. A. M. White and Edmund E. Waters, which were received and referred to the Committee on Publications.

Dr. W. L. Sutton, of same committee for Kentucky, sent an apology and asked for further time, which was granted.

The members of the same committee for the States of New Hampshire, Vermont, Massachusetts, New York, New Jersey, Pennsylvania, Delaware, Virginia, District of Columbia, South Carolina, North Carolina, Tennessee, and Minnesota being called, no reports were made.

The delegates from Connecticut and Louisiana being absent for the time, the consideration of their reports was postponed until to-morrow.

A report from Dr. J. F. Posey, of Georgia, was presented by Dr. Arnold, and subsequently withdrawn by him for the purpose of preparing an abstract of it.

#### OFFICERS FOR THE ENSUING YEAR.

The committee on Nominations then appeared, and through their chairman, Dr. J. B. Lindsley, reported the following officers of the Association for the ensuing year, viz :

\* Received after the adjournment.

*President*—Dr. PAUL F. EVE, of Tennessee.

*Vice-Presidents*—R. J. Breckinridge, of Kentucky; D. M. Reese, of New York; W. IL Byford, of Indiana, and Henry F. Campbell, of Georgia.

On motion of Dr. Arnold, of Georgia, the report was accepted.

The chairman stated that the Secretaries will be selected when it is ascertained where the next meeting of the Association will be held.

Dr. Wister, of Pennsylvania, moved that a committee of three be appointed by the President to conduct the newly elected officers to the chair, which was carried.

The President appointed as such committee, Drs. Wister, Arnold and McGugin.

The President elect being absent, the Association adjourned to meet at 9 o'clock, A.M., to-morrow.

## SECOND DAY.

NASHVILLE, May 6th, 1857.

The Association met pursuant to adjournment. The minutes of yesterday were read and adopted.

The committee appointed on yesterday, Drs. Wister, Arnold and McGugin, were then requested to conduct the newly elected officers to their respective seats.

### DR. EVE'S SALUTATORY.

Dr. Eve, of Tennessee, in taking the chair, addressed the Association in a few pertinent remarks, as follows:

#### *Gentlemen of the American Medical Association:*

It is with deep emotion that I attempt to return you my heart-felt thanks for this distinguished honor. In elevating one so unworthy of this station, so ill-prepared to preside over your deliberations, or carry out the great designs of this body, I must express the apprehension that you have done yourselves injustice, and, it may be, not advanced its best interests. But, believing that this office should neither be sought nor declined, when tendered as it has been, after my State had declined to take any part in the nomination of a presiding officer, I enter upon the discharge of its onerous duties with much diffidence, and shall have frequent occasion to throw myself upon your considerate indulgence.

We are engaged, gentlemen, in a good and noble work. Life, the greatest of human blessings, and health, the sweetest stimulus to earthly enjoyments, are our end and aim. We live to secure the one and to preserve the other. To promote these all important objects, the medical profession of our country have, during the past twelve years, annually appointed delegates to assemble and counsel how this may be effected. And we are here to-day on one of these great festive occasions, and, amidst our mutual congratulations, these glorious re-unions of good-will and fellowship among the brotherhood, must not forget that to us is committed the health and lives of others. In maintaining the honor and increasing the usefulness of medical science, we become the best contributors to the welfare and happiness of those around us. You have come up hither from the North and from the South, from the East and from the West, and have done well neither to count the cost nor calculate the sacrifice; for the cause in which you are engaged is worthy of you. You present again the sublime spectacle of brethren from sections of this widely extended Union, congregated to devise the best means to relieve suffering humanity; and may I not add, we are here with

“Our souls by love together knit,  
Cemented, mixed in one;  
One hope, one heart, one mind, one voice.”

Dr. Winston, of Tennessee, read the names of additional delegates to the Association.

Dr. Hooker, from the committee on Medical Topography and Epidemics for the State of Connecticut, being called on for his report, arose and explained that it was his understanding that the committee were to have three years in which to make their report, and at the end of that time he would either be prepared or ask the indulgence of the Association for further time.

The President, under a resolution passed at the last meeting, appointed Drs. Currey, Grant and Evans, a committee on Voluntary Contributions.

Reports now being in order, the report of Dr. Posey, of Georgia, was called for; Dr. Arnold, of Georgia, read an abstract of the report of Dr. Posey; all of which, on motion of Dr. Palmer, of Michigan, was referred to the committee on Publication, under a suspension of the rule.

On motion of Dr. Wood, of New York, the reports which were presented yesterday were also referred to the committee on Publication, under a suspension of the rule.

The State of Ohio being called upon for a report upon its Medical Topography and Epidemics, the Secretary read an apology from Dr. G. Mendenhall, who asked further time in which to make a report, which was granted.

The States of Mississippi, Missouri, Michigan, Illinois, Indiana, Wisconsin, Iowa, California, and the U. S. Navy, being called, no response was made.

A telegraphic dispatch from Dr. J. M. Sims, of New York, who was to report on the Treatment of the Results of Obstructed Labor, was received and referred to the appropriate committee.

A communication was received from the Southern Methodist Publishing House, inviting the members of the Association to visit that establishment, which was accepted.

A communication was read by Dr. Lindsley, of Tennessee, from the Medical Association of Washington City, inviting the National Association to hold their next annual meeting in that city. On motion, the communication was referred to the committee on Nominations.

A resolution was offered by Dr. Bartlett, of Wisconsin, tendering a vote of thanks to the late President, Zina Pitcher, for the able manner in which he has presided over the deliberations of this body, which was unanimously adopted.

The reports of Special Committees for 1856-7, being next in order, they were called in order as follows:

*Inflammation—Its Pathology, etc.*—Dr. E. R. Peaslee, Maine; asked further time. Referred.

*Anatomy and Histology of the Cervix Uteri.*—Drs. H. Hutchinson and Charles E. Isaacs, New York; no report.

*Treatment of Cholera.*—Dr. J. Taylor Bradford, Kentucky; no report.

*Treatment best adapted to each variety of Cataract, etc.*—Dr. Mark Stephenson, New York; further time asked. Referred.

*Causes of the Impulse of the Heart, etc.*—Dr. J. W. Corson, of New York; a communication was received, and on motion of Dr. Brodie, he was continued.

*Causes of Infant Mortality, etc.*—Dr. D. Meredith Reese, of New York



read an abstract of his report, which was referred to the committee on Publication.

The venerable Dr. Shelby, of Tennessee, being present, was invited to a seat on the stand. His appearance was warmly acknowledged.

Dr. Hobbs, of Illinois, offered the following resolution :

*Resolved*, That a committee on Essays, (not including Prize Essays,) be appointed, to whom all essays prepared for publication by this Association shall be referred, which committee shall transfer to the committee on Publication, all Essays they judge worth publishing. That said committee on essays make a full report of their proceedings to the Association at its next annual session ; provided, authors of rejected essays being informed of said rejection by said committee, shall have the privilege of withdrawing their essays from the report of the committee to the Association.

On motion of Dr. Palmer, of Michigan, the resolution was indefinitely postponed.

The Secretary read a protest signed by Drs. Arnold, J. Gordon Howard, Pike Brown, and Geo. P. Padelord, against admitting the delegates from Oglethorpe Medical College, as follows :

NASHVILLE, May 6, 1857.

The undersigned, members of the American Medical Association, protest against the admission of delegates from the Oglethorpe Medical College of Savannah, on the ground that it is not a regularly organized college, it being a matter of public notoriety in Savannah, that during neither of the two sessions of its existence, have all the chairs been regularly filled. During its first session the chairs of Physiology and Materia Medica were not filled, except by a very few lectures, by the gentleman appointed to them, and the same thing occurred during its last session as to the chairs of Materia Medica and Chemistry. All of which is respectfully submitted.

RICHARD D. ARNOLD, M. D.  
J. GORDON HOWARD, M. D.  
PIKE BROWN, M. D.  
GEO. P. PADELORD, M. D.

After several resolutions were offered and some discussion,

On motion of Dr. Palmer, the whole subject was referred to a committee of three to be appointed by the chair.

Dr. Brodie, of Michigan, moved as an amendment, that no Faculty Member of a Medical College be appointed upon the committee, which was accepted by the mover.

The chair appointed as such committee, Drs. Wister, of Pennsylvania, Bemiss, of Kentucky, and Gibbs, of South Carolina.

Dr. Felix Robertson, the oldest physician in Tennessee, being present, was invited to a seat on the stand. He was greeted with marked consideration by the Association.

The Committee on Nominations was convened to transact important business.

The calling of Special Committees was resumed :

*Spontaneous Umbilical Hemorrhage, etc.*—Dr. J. Foster Jenkins, New York. Further time asked. Referred.

*Use of Instruments in Obstetrical Practice.*—Dr. Henry Carpenter, of Pennsylvania. No report.

*Measures to be adopted to Remedy the Evils existing in the present mode of holding Coroner's Inquests.*—Dr. Alexander J. Semmes, D. C. Report presented, with the following resolution attached :

*Resolved*, That committees of three, in each State, Territory and the District of Columbia, be appointed, and that said committee be, and they are hereby authorized in the name of this Association, to memorialize their respective Legislatures, to pass such laws as will best carry into effect the objects of the foregoing report.

The report was referred to the Committee on Publications, and the accompanying report adopted and referred to the Committee on Nominations.

*True Position and Value of Operative Surgery, etc.*—Dr. J. B. Flint, of Kentucky. Further time asked; granted.

*Causes and Cure of Indigestion, etc.*—Dr. G. Volney Dorsey, of Ohio. No report.

*Medical Jurisprudence of Insanity, etc.*—Dr. C. B. Coventry, of New York. Further time granted.

*Human, Animal, and Vegetable Parasites.*—Dr. Joseph Leidy, of Pennsylvania. No report.

*Value of strict attention to position in the Treatment of Diseases of the Abdomen.*—Dr. M. D. Darnall, of Indiana. No report.

*Milk Sickness.*—Dr. George Sutton, of Indiana. No report.

*Blending and Conversion of the Types of Fever.*—Dr. Clark G. Pease, Wisconsin. Communication sent, but not received. Postponed.

*Best Substitutes of Cinchona, etc.*—Dr. B. S. Woodworth, Indiana. No report.

*Use of Cinchona in Malarious Diseases.*—Dr. Franklin Hinkle, Pennsylvania. Report furnished. Referred to Committee on Publication.

*Nervous System in Febrile Disease.*—Dr. Henry F. Campbell, Georgia. Verbal abstract of report given. Referred to Committee on Publication.

*Laws Governing the absorption and Deposit of Bone.*—Dr. Jno. Neill, Pennsylvania. No report.

*Intimate Effects of Certain Toxicological Agents in the Animal Tissues and Fluids.*—Dr. John W. Green, New York. No report.

*Intimate Structure and Pathology of the Kidneys.*—Dr. Charles E. Isaacs, New York. Further time granted.

*Diseases Incidental to Emigrants, etc.*—Dr. Israel Moses, New York. No report.

*Etiology and Pathology of Epidemic Cholera.*—Dr. T. W. Gordon, Ohio. Partial report presented and referred.

*Excretions as an Index to the Changes going on in the System.*—Dr. H. A. Johnson, Illinois. No report.

*Remedial Effects of Chloroform.*—Dr. D. D. Thompson, Kentucky. No report.

*Best Method of Causing an Increase in the numbers of Essays, etc.*—Committees: Drs. Leidy, Wood and Meigs, Pennsylvania. No report. Committee continued.

*Changes produced in Composition and Properties of Milk, etc.*—Dr. N. S. Davis, Illinois. Communication read and further time granted.

*Stomatitis Materna.*—Dr. McGugin, Iowa. Further time granted.

An abstract of the report of Dr. Fenner, of Louisiana, upon the Medical Topography of that State, was then read and referred.

Dr. Singleton, of Kentucky, offered the following resolution, which was unanimously adopted:

*Resolved*, That in the death of Dr. Grafton, of Mississippi, the American Medical Association has lost a talented and useful member, and society a benefactor.

On motion of Dr. Whitaker, of Tennessee, Dr. H. Ronalds was expelled from the Association for giving certificate contrary to the rules of the Association.

Dr. Caspar Wister, chairman of the committee upon the admission of the delegates from Oglethorpe Medical College, reported as follows :

Dr. W. Benson asserts that for the past session the Oglethorpe school has been fully organized, that six professorships have been regularly filled, and that the occupants of these chairs have been in the constant fulfilment of their duties, except in cases of illness; such instances having, however, at no time interrupted the regular course of lectures, the professor absent having had his place supplied by his colleagues. The seventh chair is admitted to have been vacant; the duties were discharged however, fully by other members of the faculty.

Dr. R. D. Arnold prefers no charges beyond those admitted above.

Therefore, your committee finding nothing that infringes upon the strict letter of the law of the American Medical Association, in reference to the admission of members, we recommend that all further action in this question be suspended.

CASPAR WISTER,  
R. W. GIBBES,  
A. M. BEMISS.

The Secretary read the following preamble and resolutions, which were unanimously adopted :

WHEREAS, It has pleased God to remove by death our fellow-member, Robert M. Porter, and because of his devotion to the interests of the Profession of Medicine, and his steady support of the American Medical Association,

Resolved, That this Association learned with unfeigned sorrow of his decease; and that they have lost a firm and intelligent supporter, and society a benefactor and friend.

Dr. T. Bullard, of Indiana, offered the following :

Resolved, That in the death of Dr. John L. Mothersett, this Association has lost a useful member, and society a benefactor.

The Secretary read a communication from the Connecticut Medical Society, asking that the time for holding the meetings of the Association in northern cities be changed to a later period in the year. Referred over to the next meeting by the Constitution. Adjourned to meet at 9 o'clock, A. M., to-morrow.

### THIRD DAY.

NASHVILLE, May 7, 1857.

The Association met pursuant to adjournment. The minutes of yesterday were read and adopted.

Dr. Hoyte, from the Committee of Arrangements, read the names of additional delegates to the Association, who had arrived since the meeting of the Association yesterday.

The Secretary read a communication from Dr. Clark G. Pease, of Wisconsin, which accompanied his report on "*Blending and Conversion of the Types of Fever.*"

Dr. Hooker, of Connecticut, moved that the report be referred to the Committee on Voluntary Contributions.

Dr. McKinley moved to amend by having a portion of the report read, which was lost, and the motion recurring to refer the report, it was carried.

## VOLUNTARY CONTRIBUTIONS ACCEPTED.

Dr. Currey, from the Committee on Voluntary Contributions, submitted the following report, which was accepted :

The Committee on Voluntary Contributions has examined the following papers and recommend them for publication in the Transactions of the Association :

1st. A new Principle of Diagnosis in Dislocations of the Shoulder Joint. By L. A. Dugas, M.D., Professor of Surgery in the Medical College of Georgia, Augusta; accompanied by four photographic plates illustrating the principle.

2nd. Medical Statistics of Washington Territory. By George Sackley, M.D., U. S. A., embracing, 1st, Geological Divisions of the Territory; its Geology, Meteorology, Fauna. 2nd, White population and its diseases. 3rd, Native population; Diseases; Medical Practice; causes of their rapid disappearance; concluding remarks.

3rd. Medical Flora of Washington and Oregon Territories. By J. G. Cooper, M.D.

All of which is respectfully submitted,

R. O. CURRLEY,  
R. T. EVANS,  
GEO. R. GRANT.

Dr. Yandell offered the following resolution :

*Resolved*, That this Association re-affirm the principles respecting the rights of constituent bodies announced in a report contained in Vol. V., of its Transactions, in the following terms :

"The Faculty of every Medical College, shall have the privilege of sending two delegates to this Association, *provided*, that the said Faculty contain not less than six Professors, who give one course of instruction annually, of not less than six weeks, on Anatomy, Materia Medica, Theory and Practice of Medicine and of Surgery, Midwifery, and Chemistry; and also that said Faculty requires that its candidates for graduation, among other requisites, shall have attended two full courses of lectures with an interval of not less than six months between them, one of which courses must have been in their institution."

Dr. Breckinridge in the Chair.

Dr. Buchanan proceeded to discuss the resolution, and at the close of his remarks, moved to lay it on the table, which was subsequently withdrawn.

Dr. Boring offered the following resolutions in lieu, which he proceeded to discuss :

*Resolved*, That this Association has not the power to control the subject of Medical Education.

*Resolved*, That the great objects of this Association are the advancement of Medical Science, and the promotion of harmony in the profession.

*Resolved*, That the attempt upon the part of this body to regulate Medical Education, having most signally failed in its object, and already introduced elements of discord, any further interference with this subject would not only be useless, but calculated to disturb and distract the deliberations of this Association.

Dr. Currey offered the following resolutions in lieu of the whole :

*Whereas*, The subject of Medical Education has been committed at each annual Session to Standing Committees, and various suggestions have been proposed, which the Association has adopted, and recommended to private instructors and to the Medical Colleges.

*Resolved*, That a committee of five be appointed by the Committee of Nominations, as a Special Committee, to be composed of members who are in no respect connected with any Medical School, to devise a *System of Medical Instruction*, to be presented for the consideration of this Association at its annual session in 1858.

*Resolved*, That the proposed system shall set forth a uniform basis, upon which our Medical Institutions shall be organized, as well as have reference to the best mode of securing the Preparatory Medical Instruction to the Student, and that consequently the legitimate subjects to be embraced in said system, will include Primary Medical Schools—the number of Professorships in Medical Colleges, the length and

number of terms during the year, the requisite qualifications for graduation, and such other subjects of a general character as to give uniformity to our Medical system, and preserve harmony and friendly intercourse in the ranks of the profession.

*Resolved*, That, upon the adoption of the proposed system by the Association, all Institutions which may conform to it shall be entitled to representation at the annual sessions of this Association and none others.

The subject was further discussed by several members of the Association. Dr. Reese, after some remarks, moved the indefinite postponement of the whole subject; which was lost.

Dr. Arnold moved the previous question, which was lost, and the discussion proceeded at considerable length, when

Dr. Hooker moved the previous question on the resolutions of Dr. Currey.

The reading of the various resolutions being called for, they were read to the Association.

The motion of Dr. Hooker being in order, the previous question was called, and the resolutions of Dr. Currey were adopted.

Dr. Lindsley, from the Nominating Committee, submitted the following report:

*Secretaries*.—Robert C. Foster, of Tennessee, A. J. Semmes, of Washington City.

*Treasurer*.—Caspar Wister, of Philadelphia.

For the next place of meeting, Washington City.

#### STANDING COMMITTEES.

*Committee of Publication*.—Francis G. Smith, of Philadelphia, chairman; Caspar Wister, of Philadelphia; R. C. Foster, of Nashville; A. J. Semmes, of Washington City; Samuel L. Hollingsworth, of Philadelphia; Samuel Lewis, of Pennsylvania; H. F. Askew, of Delaware.

*Committee on Prize Essays*.—Grafton Tyler, of Georgetown, D.C., chairman; J. C. Hall, of D. C.; J. F. May, of D. C.; Thomas Miller, of D. C.; A. J. Semmes, of D. C.; Joshua Riley, of D. C.; W. J. C. Duhamel, of D. C.

*Committee of Arrangements*.—Harvey Lindsley, chairman; W. J. C. Duhamel, Cornelius Boyle, P. H. Coolidge, G. M. Dove, A. Y. P. Garnett, Wm. P. Johnston, of D. C.

*Committee on Medical Education*.—G. W. Norris, of Philadelphia, chairman; A. H. Luce, of Illinois; E. R. Henderson, of South Carolina; G. R. Grant, of Tennessee; T. S. Powell, of Georgia.

*Committee on Medical Literature*.—A. B. Palmer, of Detroit, chairman; A. F. Alexander, of Alabama; J. M. Mosgrove, of Ohio; P. Cassidy, of Pennsylvania; S. Pollak, of Missouri.

*Vacancies in Committee on Medical Topography and Epidemics*.—T. B. Shuford, to fill the vacancy caused by the death of Dr. Grafton, of Mississippi. C. W. Parsons, to fill the vacancy caused by the resignation of Joseph Mauran, of Rhode Island.

#### SPECIAL COMMITTEES.

*Spontaneous Umbilical Hemorrhage of the newly born*.—J. Foster Jenkins, of New York.

*Influence of Marriages of Consanguinity upon Offspring*.—Dr. Berniss, of Kentucky.

*Functions of the Different Portions of the Cerebellum*.—E. Andrews, of Illinois.

*Causes of the Impulse of the Heart and the Agencies which Influence it in Health and Disease.*—J. W. Corson, of New York city.

*Treatment of the Results of Obstructed Labor.*—J. Marion Sims, of New York.

*Treatment best adapted to each variety of Cataract, with the method of operation, place of election, time, age, etc.*—Mark Stephenson, of New York.

*Human, Animal, and Vegetable Parasites.*—Jos. Leidy, of Philadelphia.

*Best substitute for Cinchona and its preparations in the treatment of Intermitent Fever, etc.*—B. S. Woodward, of Indiana.

*Intimate structure and pathology of the Kidney.*—Charles E. Isaacs, of New York.

*Etiology and Pathology of Epidemic Cholera.*—T. W. Gordon, of Ohio.

*Inflammation of Cervix Uteri.*—Henry H. Miller, of Louisville, Ky.

*On Milk Sickness*—W. H. Byford, of Indiana.

*Best means of causing an increase of the number of Essays.*—Drs. Leidy, Wood and Meigs, of Pennsylvania.

*Changes produced in Composition and Properties of Milk.*—N. S. Davis, of Illinois.

*Stomatitis Materna.*—D. C. McGugin, of Iowa.

*On Criminal Abortion, with a view to its general suppression.*—H. N. Storer, of Boston.

The committee recommend that the committees ordered by the adoption of the resolutions accompanying Dr. A. J. Semmes' report, be filled by the several State Societies.

On motion of Dr. Brodie, amended so as to refer the same to the officers of several State Societies. Carried.

The committee also recommend the amendment of the third article of the constitution, in relation to meetings, by inserting after the words "first Tuesday in May," the words, *or the first Tuesday in June*, and also by inserting after the words "shall be determined," the words, *with the time of meeting*.

*Special Committee on the Present state of Science, as regards the Pathology and Therapeutics of the Re-productive Organs of the Female.*—D. For-  
dyce Barker, of New York.

*On Moral Insanity.*—D. M. Reese, of New York.

*On Calculi and the Diseases of the Urinary Organs, in Iowa, Minnesota, and Nebraska.*—Dr. J. C. Hughes, of Keokuk, Iowa.

*On the nature, tendency and general treatment of Syphilitic Bubo.*—Moses Gunn, of Detroit, Michigan.

*Organic Chemistry—its progress and relations to Physiology and Pathology.*—Professor Samuel St. John, of New York.

*On Medical Education.*—(By Dr. Currey's resolution,) James R. Wood, of New York; Geo. R. Grant, of Memphis, Tennessee; John Watson, of New York; C. B. Nottingham, of Macon, Georgia; Rene La Roche, of Philadelphia, Pennsylvania.

*To fill a vacancy in the Committee on Medical Topography and Epidemics.*—Dr. J. L. Cabell, of Charlottesville, Virginia.

Dr. March moved that the Report of the Nominating Committee be taken up, and each subject to which it refers, be considered separately, which motion prevailed. That portion relating to nominations was then adopted.

The place of the next annual meeting of the Association being the next

subject in order, after some discussion, on motion of Dr. March, the report of the committee was adopted.

Dr. Lindsley moved that, as Dr. Semmes, one of the newly elected Secretaries was absent, Dr. Brodie, of Michigan, be elected Secretary *pro tem*, which was carried.

Dr. Pitcher offered the following resolution, which was unanimously adopted :

*Resolved*, That a committee of three be appointed, of which the President of the Association shall be chairman, to communicate with the Surgeon General of the Army, the chief of the Medical Bureau of the Navy, and the Secretary of the Treasury of the United States, with a view to secure the concurrence of these departments of the Federal Government, so that its contributions to the Medical Topography, the Vital Statistics, and the Sanitary Police of the nation may be made tributary to the labors of this Association.

The Chair appointed as such committee, Drs. Z. Pitcher, of Michigan, and R. H. Coolidge, of Kansas.

Dr. Boling, Chairman of the Committee on Prize Essays, submitted the report of said Committee, as follows :

#### PRIZE ESSAYS.

The Committee on Prize Essays report that four essays have been received, each possessing great merit.

The Committee selected the following two Essays for the two prizes, provided for at the last meeting of this Association.

1st. One entitled "The Excito-Secretory System of Nerves. Its relation to Physiology and Pathology," with the following motto :

*"Observation becomes Experiment when used in severe processes of Induction,"* and signed Henry Fraser Campbell, Georgia.

2nd. "Experimental researches relative to the Nutrition, Value and Physiological Effects of Albumen, Starch and Gum, when singly and exclusively used as Food," with the following motto :

*"Quum sequimur ? quove in jubes ? ubi ponere sedis ?"*

*"Da pater augurium, atque animis illabere nostris !"* and signed, William A. Hammond, M. D., Assistant Surgeon, U. S. Army.

The President read an invitation to the members of the Association, to visit the University of Nashville, in its Military, Literary and Medical Departments.

The Committee on Voluntary Contributions, reported in favor of the publication in the Transactions of the Association, of the following paper. "On the blending and conversion of Types in Fevers." By C. S. Pease, M. D., of Wisconsin. The report was adopted.

Dr. McMurray offered the following resolution, which was adopted :

*Resolved*, By this Association, that the Committee on Publications be instructed to append the Code of Ethics of the American Medical Association to each volume of its present and future Annual Transactions.

The amendments to the Constitution proposed by Dr. Stocker, of Pa., at the last Annual Session, were taken up and laid on the table.

Dr. Lindsley offered the following amendment to the Constitution, which was seconded by Dr. Gunn :

"In Art. II, omit the words 'Medical Colleges,' and also the words 'The

**Faculty of every regular constituted Medical College, or chartered School of Medicine, shall have the privilege of sending two delegates."**

The amen linen lies over until the next meeting of the Association, under a rule of the organization.

On motion of Dr. Palmer, the resolutions reported at the last Annual meeting of the Association, by the Committees on Plans of Organization for State and County Medical Societies, were taken up and adopted.

The following resolutions were offered and adopted :

By Dr. Pitcher—

*Resolved*, That the members of this Association, as recipients of the cordial, generous, and elegant hospitalities extended to them by the profession and the citizens of Nashville, in placing on record an expression of thanks for the social amenities they have enjoyed during its tenth annual session, wish also to leave behind them the assurance, that the recollection of their short sojourn in Tennessee, will be cherished as dearly as the remembrance of the far off sound of water, by the exhausted and way-worn traveller.

By Dr. Means—

*Resolved*, That the earnest thanks of this body be presented to the authorities of the State and City, who have tendered this magnificent State Capitol for their sittings during the present session.

By Dr. Currey—

*Resolved*, That the thanks of this Association be tendered to the Reporters of the City Press, for the accuracy and promptness with which they have reported the proceedings of the Association, and to the Publishers, for the liberal supply of their morning papers during the Sessions of the Association.

By Dr. Wister—

*Resolved*, That the thanks of this meeting be presented to Dr. Wm. Brodie, for the efficiency with which he has discharged his duties of Secretary.

By Dr. Byford—

*Resolved*, That the State and County Societies throughout the Union be requested to recommend their members to purchase the Transactions of the American Medical Association, and that their officers act as agents for the same.

On motion of Dr. Gunn, of Michigan, the Association recognized the presentation of a pamphlet by Henry Fraser Campbell, M.D., claiming "Priority in the Discovery and Naming of the Excito-Secretory System of Nerves"

On motion of Dr. Byford, the Association then adjourned *sine die*.

PROFESSOR DANIEL F. WRIGHT.—We are gratified and obliged at finding in the last number (May) of the Memphis Medical Recorder a very favorable and elaborate review of our contributions to the Physiology of the Nervous System, over the initials of this distinguished gentleman. His was the first and the fullest examination which our Ganglionic Theory of Typhoidal Fevers has received. We regret that our space will not allow us to consider certain important suggestions embodied in his review of the *Excito-secretory System*, in the present number, nor to introduce a valuable case of *Tetanus* therein reported; but we hope, at an early date, to give our readers a full discussion of Dr. W.'s views, which we at once see will serve to illustrate an extensive body of phenomena in relation to the new func-



tion of the nervous system. Our space, at present, only allows us to state that we fully appreciate the approbation of a reviewer whose opinion we so highly value.

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Dr. MARSHALL HALL.—Having had frequent inquiries made in relation to our communication to this gentleman, on the subject of the Excito-secretory System of Nerves, we venture to quote the following from the private letter of a distinguished Surgeon of London, knowing that it will explain to our readers, as it satisfies us, as to the probable cause of our not having received a reply to our communication to this time.

LONDON, May 20th, 1857.

\* \* \* \* I have read your paper on the Excito-Secretory System of Nerves, which certainly fully establishes your claim to originality in this investigation. I have had no opportunity of seeing Dr. Marshall Hall since I received your communication. I believe that he is staying at the seaside, and I am sorry to add that he is laboring under very serious disease.

\* \* \* \* \*

To Dr. H. F. CAMPBELL,  
Augusta, Georgia, United States of America.

The above is the only intimation, we have as yet, that our communication has been received in Europe. The London Lancet "makes no sign."

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EXCITO-SECRETORY SYSTEM—CLAIM ADMITTED IN LONDON.—Since the above was in type, we have just received the July number (in advance,) of the *North American Medico-Chirurgical Review*, and we are gratified to find, that notwithstanding his absence from home, and his impaired health, Dr Marshall Hall has generously acknowledged our claim, and secured the publication of all the essential parts of our Letter, in the pages of the London Lancet, even as early as May 2nd. This is certainly making the amende nobly and promptly. When we wrote, "the London Lancet has made no sign," we referred of course to the American reprint, which we suppose cannot furnish the same matter simultaneously with the original work. We have not yet seen Dr. Hall's note, but quote from the *North American Review*, edited by Professors Gross and Richardson :

"The recent announcement of the discovery of the Excito-Secretory sub-system of the Spinal Nerves by Dr. Marshall Hall, of London, has called forth a letter, and various accompanying documents, addressed to that gentleman, from Dr. H. F. Campbell, of Augusta, Georgia, who clearly sets forth his own claims to the discovery in question. The essential portions of Dr. Campbell's communication are copied into the London Lancet (May 2,) by the request of Dr. Marshall Hall, who gracefully yields the credit of the *idea* and the *designation* of the Excito-Secretory action to our countryman."

**RESIGNATIONS AND NEW APPOINTMENTS IN THE NEW ORLEANS SCHOOL OF MEDICINE.**—Dr. A. Foster Axson has retired from the Chair of Physiology, in consequence of impaired health. Dr. Anthony Peniston, formerly Adjunct to the Chair of Anatomy, has been promoted to the Chair of Physiology; while Dr. Theodore S. Clapp becomes Adjunct to Anatomy, vice Dr. Peniston promoted.

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*A Manual on the Detection of Poisons by Medico-chemical Analysis.* By Dr. FR. JUL. ORTO, Professor of Chemistry in Caroline College, Brunswick. Translated from the German, with notes and additions, by Wm. ELDERHORST, M.D., Professor of Chemistry in the Rensselaer Polytechnic Institute, Troy, N. Y. New York: H. Baillière. 1857. Pp. 178, 12mo.

This is a most convenient and practical little Manual on the subject of which it professes to treat, viz., various methods for the Detection of Arsenic; 2ndly, Detection of Antimony, Tin, Mercury, Copper, Lead and Zinc; 3rdly, Hydrocyanic Acid; 4thly, Oxalic Acid; 5thly, Detection of Phosphorus; 6thly, To detect Alcohol and Chloroform; 7thly, On the Detection of the Poisonous Alkaloids, as Narcotine, Strychnine, Morphine, Aconitine, Veratrine, &c., &c.; 8thly, On the Examination and Detection of Blood-stains, for the determination of the value of evidence in legal cases. It is evidently a valuable little work, and of such a size and fair print, as to be readable by all who may desire an acquaintance with subjects therein discussed. It was kindly sent to us by H. Baillié, 290 Broadway, New York.

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**BOOKS FOR REVIEW.**—We are forced to leave out several notices of valuable works sent us for review, in consequence of so much of our space having been devoted to the minutes of the Association.

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*On the Ligature of Arteries in Suppurating Wounds.* By M. NÉLATON. (Gazette des Hôpitaux, 1857. No. 1.)—In one of his most recent clinical lectures, M. Nélaton made the following observations, the occasion being a secondary hemorrhage in the palm of the hand. Nothing is more difficult, he observed, than to arrest a hemorrhage of the hand, especially when this is consecutive—that is, when the wound is covered by pyogenic granulations. If not previously instructed as to the proper management of these secondary hemorrhages, you will be extremely embarrassed. The blood flows, you employ compression, and it ceases; but the hemorrhage will not be long before it returns, and will then be uninfluenced by compression. If compression be made above the wound, edema takes place in all the subjacent parts, and the hemorrhage soon returns. The radial, or the ulnar, or the brachial may be tried, and yet the bleeding does not stop. Meeting such a case, M. Nélaton formerly was quite at a loss to know what to do, impressed as he was with Dupuytren's *dictum*, that arteries in a suppurating wound will not bear the ligature, the premature fall of this in-

fallibility giving rise to a return of the hemorrhage. Nevertheless, he ventured to tie the two ends of the bleeding vessel of the palmer arch; and although the ligature fell sooner than usual, no hemorrhage followed. He has frequently since then tied vessels under analogous circumstances, and has never seen hemorrhage as a result of the fall of the ligature. Although, therefore, this fall takes place earlier (usually about the third or fourth day,) than is the case with a ligature applied to a healthy artery, it is not premature, for bleeding does not follow. Examining the matter experimentally, upon the dead body, M. Nélaton has found that ligatures applied to arteries in a state of suppuration (as in patients who have died after amputation) produce identically the same effects upon the coats of these vessels as upon arteries remote from the seat of inflammation; the same division of the inner coats and preservation of the outer taking place in the two cases. He feels, therefore, perfect confidence in the soundness of the practice, supported as it is by numerous cases that have occurred to him, both in private and hospital practice.—*Brit. & For. Med. Chir. Review.*

*Apoplectic Ophthalmia.*—Under this name Dr. Quadri, of Naples, states a fact worthy of attention. It is, that persons predisposed to apoplexy, present ordinarily a species of ophthalmia, characterised by the presence of varicose vessels, muddiness of the eye, and intolerance of astringent collyria a little strong. In the second form the eye secretes a yellowish mucus, very abundant and viscid, and presents a high degree of photophobia: the cornea may then become the seat of abscess, ulcers, or more frequently of pannus. Sometimes also, iritis succeeds to keratitis. The tendency to muddiness, sensibility to astringents, etc., are found in this second form: both forms precede apoplexy one or two years. The importance of these symptoms is equal to the danger of the disease, which must be met in time to be successfully combatted.—[*Phil. Med. and Surg. Jour.*, from *Revue Therapeutique*.]

*Facial and Dental Neuralgias.*—Doctor Michel Andre recommends the following mixture for prompt relief: Extracts of opium, of Belladonna, and of stramonium, each one part; laurel water twelve parts. A few drops are placed in the meatus auditorius, and cotton is placed in the passage, taking the precaution to hold the head on the opposite side for a few moments, that the fluid may pass freely into the canal.—[*Ib.*]

*Night Sweats.*—Dr. Abbot, of Boston, publishes a series of cases of phthisis to show the decided influence of the oxide of zinc in relieving the night sweats, which are so troublesome in the latter stages of this disease. His favorite prescription is four grains of the oxide of zinc with three of extract of conium, in two pills, at bed-time. Hyoscyamus and opium are sometimes used in combination with the zinc. One of the good effects is the preservation of a soluble state of the bowels. Dr. A. prefers the oxide to the sulphate of zinc.—[*Memphis Med. Recorder*.]

*Chloroform in Sea-Sickness*—It is said to have been discovered that chloroform in doses of ten to twelve drops, repeated as occasion requires, is a specific for sea-sickness. Out of twenty passengers, eighteen were cured by a single dose, and the two others by two doses each.—[*Ib.*]

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## ORIGINAL AND ECLECTIC.

### ARTICLE XXIII.

*Some of the Effects of Alcohol upon the Physical Constitution of Man.*

By J. P. STEVENS, M. D., of Walthourville, Liberty County, Georgia.

"Alcohol is an inflammable liquor lighter than water, of a warm acrid taste, colorless, transparent and of a pungent, aromatic odor."

It is the product of the fermentation of various grains, vegetables, and fruits. For commercial purposes it is chiefly obtained from grapes, molasses, corn, rye, and cider. The various kinds of wine and malt liquors have, each, a certain proportion of alcohol. The popular notion then, that the use of beer, and malt liquors generally is innocuous, upon the assumption that they contain none of this agent, is erroneous. According to the analysis of Brande, a large number of the most popular wines contain from 12 to 24 per cent. of alcohol; cider, porter, and ale, each from 4 to 8 per cent.; brandy 58, whiskey 54, and gin 57 per cent. Malt liquors differ from what are usually denominated as alcoholic and vinous preparations, in their possessing an intensely bitter, somewhat nutritious and narcotic principle, derived from the hop, which is employed for preserving them. The astringency of this agent, it is said, precipitates the vegetable mucilage, and prevents the fermentation which is apt to follow transportation to a warm climate. All animal and vegetable substances are composed of

four elementary principles in nature—carbon, hydrogen, oxygen, and nitrogen. Four parts of carbon, six of hydrogen, and two of oxygen, form alcohol. As is well known, it is a highly inflammable substance; it resists the process of putrefaction in vegetable and animal substances, and is destitute of an essential element of all organized bodies, namely, nitrogen. Its effects upon the vital organism more especially demands our attention.

According to the quantity introduced into the stomach within a limited time, alcohol acts as a virulent poison, or a local and diffusible stimulant. When taken in large quantities, its sedative effects resemble those of prussic acid. It expends its force upon the nervous system, creating scarcely any antecedent stimulation, but almost immediately extinguishing the innate life-principle. Dr. Percy introduced a considerable quantity into the stomach of a dog, and death followed in two minutes. The post-mortem appearances of the blood, in such circumstances, are analogous to those following death by lightning; it loses its power of coagulating. Alcohol cannot be digested by the stomach. That peculiar digestive solvent in combination with the gastric acids is called pepsin. Now, the presence of alcohol is said to precipitate pepsin; to separate it from the gastric acids, and render it inert. The *modus operandi* of alcoholic stimulants is by direct imbibition into the blood. The absorbent veins drink them up, and quickly diffuse them, through the medium of the circulation, into every part of the system.

Alcohol is essentially a brain stimulant; it seems to have a special affinity for this important organ. In moderate quantities, it brightens the poetic talent, quickens the imagination and fancy, but does not appear to improve the reflective faculties, whereby a severe logical, or mathematical deduction is to be made after intense concentration of thought upon a given subject. The first impression of alcohol invokes a sensation of perfect self-complacence, as well as of general benevolence. It paralyses the tongue of slander, brightens the flashes of wit and humor, dispels the clouds of gloom and sorrow, demolishes by a single blow the barriers to reputation, fortune and glory, and encircles the future with a bright halo of hope, joy, and perpetual bliss. Another sparkling julep beclouds the mental vision; ideas confused and indistinct run into each other, objects are seen as if veiled with a mist; silence and moroseness, or brawlings and clamor, take the place of

jocund mirthfulness and warm affection, language becomes incoherent and silly, and the faculty of memory is blotted out.

The cerebellum is next invaded: the motions of the body are unsteady, first one side and then the other, like a water-logged junk, without a helm, it is tossed upon the surging billows, and finally becomes engulfed in the abyss of lethean stupidity. There he lies: the vessels and sinuses of his brain filled with a poison which not only extinguishes every scintillation of intellect, but almost annihilates the faculties of volition and sensation.

In another phase of his career, we see the inebriate the victim of a delusion more torturing than that of beastly degradation. With glaring eyes and ceaseless vigils, he beholds the Prince of Darkness, with clanking chains and fiery imps tracking his every step, and ready to take him a prisoner to those realms, where the devotees of Bacchus render obeisance to their liege lord. The brain has been known to be so completely saturated by constant immersion in alcohol during life, that this fluid has been extracted from its pulp, so that the organ has been brought into a condition capable of resisting the process of putrefaction, and admirably prepared for the scalpel of the demonstrator of anatomy. We will further pursue this subject by inquiring into the validity of a few of, what we deem, popular fallacies concerning the uses of alcohol.

Does alcohol contribute to the nutrition of the body, and does it increase man's physical strength and power of endurance? The alimentary principles of food are divided into two classes, the nitrogenous and the non-nitrogenous; or the flesh-producing and the heat-producing. It is a proposition generally conceded by chemical philosophers, that the albuminous tissues are maintained chiefly by those alimentary substances which contain the elements similar to those which enter into their own composition. What are called the nitrogenized compounds are transformed into the tissues of the body. They are called albumen, fibrin, gluten, and casein. Albumen abounds in lean meats, various cereal grains, and a variety of vegetables and grasses.

To the mind of the philosopher, then, truly "all flesh is grass." The muscles which move our limbs, the internal organs which support life, and the very seat of intelligence, owe their existence and integrity to a regular supply of the alimentary principles above mentioned. Lean meats, we all know, are easy of digestion, and become rapidly assimilated to the wants of the animal economy.

Oily and fatty substances are difficult of digestion. They are devoid of albumen. Oil, starch, gum, sugar, and the vegetable acids and fruits, supply us with heat-producing elements. They are incapable of transformation into flesh. How beautifully and signally are the wants of man supplied by the hand of a munificent Providence!

The inhabitants of the polar regions trap the bear and beaver, and lay in store an abundance of oil and blubber, from the whale and other animals. Under the burning heat of the torrid zone, the air is fragrant with the sweet perfume of many flowers, and the senses are ravished with the rich luxuriance of luscious fruits, endlessly diversified in qualities, exactly suited to the physical wants of man.

The non-nitrogenous substances abound in hydrogen and carbon, highly combustible; hence they are appropriated in the animal economy to the sustenance of heat and inspiration. We call them, therefore, the fuel whereby the steam is generated which keeps the machinery in motion. Thus, we see that the hibernating animals, the polar bear, for instance, which remain dormant in winter, become excessively fat during the autumnal months. This deposit is slowly absorbed into the circulation, supplies the lungs with the materials for respiration, and thus it sustains life during the long state of his apparent inebriation. When the warm spring months impart their genial influence, he creeps out of his den a poor, lean, decrepid creature, the mere shadow of his former self. "Currie mentions the case of an individual who was unable to swallow, and whose body lost 100 lbs. in weight during a month."

We are well aware that alcohol is highly inflammable; it being entirely destitute of nitrogen is not convertible into flesh and blood, and, therefore, not a source of nutrition to the body. The Indian hunter, with his limited supply of parched corn and jerked venison, is almost a stranger to disease and fatigue. Through the trackless forest, he pursues the bounding deer, or with relentless ire the blood of his enemy, and yields neither repose to his limbs, nor slumber to his eyes, until avarice or vengeance is fully satisfied. It is said that among the trainers for prize-fighting, three essential points are observed: "1st, the requisite amount of exercise; 2nd, a diet of lean meats and stale bread; and, 3rd, an *entire abstinence* from alcoholic potations." In an extensive brick-mak-

ing establishment, which employment is regarded as being sufficiently laborious to test the capability of physical endurance, we have the following statistics:

Says a gentleman, residing in Uxbridge, England, "I obtained the amount of bricks made by the largest maker, and the result in favor of the tee-totaller was very satisfactory. Out of 28,000,000 of bricks made, the average per man, made by the beer-drinker in the season was 760,269, while the average for the tee-totaller was 795,400, which is 35,131 in favor of the latter. The highest number made by a beer-drinker was 880,000; the highest number made by a tee-totaller was 890,000; the lowest number made by a tee-totaller was 746,000; the lowest number made by a beer-drinker was 659,000, leaving 87,000 in favor of the former."\*

Equally striking comparisons were made in an extensive machine shop. In the report of the proprietor, where between one and two thousand workmen were employed, he affirms, that in the summer-time, the men engaged as strikers to the forge who drink largely of water, are more active, can do more work, and are more healthy than those who make use of fermented liquors. Among agriculturists, where comparisons have been made by selecting equal numbers from the ranks of tee-totalism and moderate drinking, for the purpose of testing the capability of the two classes to endure protracted labor, in every instance the former have come off victorious.

As a familiar illustration of the influence of those substances like alcohol, which are deficient in strength producing elements, let us recur to our observation of facts in every day life. Who, when about to undertake a long journey, especially in warm weather, would confine his horse to a preparatory diet of potatoes, or continue this diet during the progress of his journey? His animal might become sleek and rotund while idle, laying up deposits of fat from his highly carbonaceous food, but after a few days of severe labor he would become dull and sluggish, and from loss of flesh and strength incapable of further exertion. Experience directs that his manger shall be well supplied with corn, hay, and oats. The article first mentioned abounds in fat-producing elements, while the latter afford those constituents which impart strength to the body, and by a slow process of assimilation to the different tissues they maintain an adequate proportion of heat, as

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\* *Medico-Chirurgical Review.*



well as a due supply of albumen to the muscles and bones, thereby affording the true source of nervous and muscular power.

Does alcohol protect against extremes of heat or cold?

The first impression of cold upon the body is exhilarating. It quickens muscular motion, increases the number of respirations, and imparts an electrifying influence to the whole nervous system. Extreme cold, protracted for a length of time, powerfully depresses the vital energies. We would suppose, then, that any agent loaded with carbon and hydrogen, which could be appropriated by the animal organism, would be peculiarly fitted for counteracting this depressing influence. It will be remembered that the *modus operandi* of alcohol, is by direct imbibition into the blood, and by its impression upon the nervous system. It is not susceptible of a gradual process of digestion, whereby its heat-producing qualities are slowly supplied to the lungs for the elaboration of heat, but its highly inflammatory nature produces intense plethora of the blood-vessels, and great general excitement. In proportion to the degree of excitement will then be a corresponding stage of depression; increased sensibility to cold must follow the subsidence of the impression made by a single potation. The toper, therefore, by frequent alternations of those opposite states of the system, loses his physical appliances to resist the effects of cold, and he either relapses into the fatal stupor of intoxication, or into that slumber which is the inevitable precursor of the freezing of the very fountain of life.

Naval commanders, who have wintered crews in high polar latitudes, give abundant testimony in confirmation of the views just expressed. "In 1619, the crew of a Danish ship of 60 men, well supplied with provisions and ardent spirits, attempted to pass the winter at Honduras Bay, but 58 of them died before spring; while in the case of an English crew of 22 men, in the same circumstances, but destitute of distilled spirits, only two died. In the winter of 1796, a vessel was wrecked on an island off the coast of Massachusetts; there were seven persons on board; it was night; five of them resolved to quit the wreck and seek shelter on shore. To prepare for the attempt, four of them drank freely of spirituous liquors, the fifth would drink none. They all leaped into the water; one was drowned before he reached the shore, the other four came to land, and in a deep snow and piercing cold directed their steps to a distant light. All who drank spirits failed, and

stopped, and froze one after another; the man who drank none reached the house in safety." (*Younans*, on Alcohol.)

Hot coffee and tea are much to be preferred as heat producing agents, being equally as prompt in imparting warmth to the body, and their effects are much more protracted. The ingestion of solid food, more especially lean and fat meats, keeps up a regular supply of heat, for it is, during the process of digestion and assimilation, imparting warmth to the body, and strength to the muscles and bones. In excessively cold countries, Lapland for instance, you will see the inhabitants luxuriating upon a dinner of train oil and tallow candles. Disgusting as this repast may appear to us, he, nevertheless, enjoys it; for the excessive demand made upon his blood for those materials which aid in resisting the external temperature, sharpens his appetite and affords him transporting pleasure. But it is asserted that in hot climates where the system becomes enervated by long-continued and elevated temperature, some stimulus is necessary to give appetite for food, and to brace up the relaxed fibre. It is a well established fact, that the inhabitants of hot climates require less food, particularly of a stimulating nature, than those inhabiting cold regions; and for the very obvious reason that there is less fuel required. As has been already remarked, a good portion of our aliment, during the winter, is exhausted in maintaining the natural temperature of the body; during the summer, the surrounding air being heated, the demand made by the respiratory system is withdrawn, and food of that kind and quality is called for which supplies the natural waste of the tissues. The hard laboring man will perceive very little difference in his appetite during this season, for the process of combustion is continuing at a rapid rate, and he would soon be consumed, did not the amount of surplus heat find exit in the form of watery vapor from the lungs, and through the skin in copious torrents of perspiration. It is the man of idle and sedentary habits who is troubled with a disgust for food. "A drop of comfort" immediately before dinner is solicited to spur up the languid stomach, and stimulate the drooping energies. But at such times, the individual pursuing an occupation wherein there is comparatively a passive condition of the muscles, nature is competent to dispose of but little food, and her demands are made accordingly. Instead of swallowing fire at such times, you must pour on water. At such an hour as you are in the habit of visiting the ale or por-

ter fount, wake up your sleeping muscles in the varied exercises of the gymnasium, and then indulge in the glorious luxury of a cold bath, and in lieu of temporary hilarity, and a morbid relish for the tempting viands of the table, whereby your stomach is forced to receive double as much food as it can digest with ease and comfort, inducing a sensation of heaviness and stupidity after dinner, there will be an electrical influence imparted to the muscular fibre, a moderate increase of your appetite, an elasticity of step and feeling, that impart life and vigor to the digestive apparatus, and ease and comfort to the soul. Dr. Leibig, than whom I could not cite higher authority, thus discourses: "The Englishman, in Jamaica, sees with regret the disappearance of his appetite, previously a source of frequently recurring enjoyment; and he succeeds by the use of cayenne pepper and the most powerful stimulants, in enabling himself to take as much food as he was accustomed to at home. But the whole of the carbon thus introduced into the system is not consumed; the temperature of the air is too high, and the oppressive heat does not allow him to increase the number of respirations by active exercise, and thus to proportion the waste to the amount of food taken; disease of some kind must necessarily ensue." Thus, we see, that an individual in the enjoyment of health requires no aid from this despotic sovereign for the performance of the most protracted and laborious demands upon his physical and mental energies. Temperance in diet, properly regulated exercise, and "Nature's sweet restorer, balmy sleep," and ablutions and draughts from the pure fountain, unadulterated as it issues from the bosom of earth, afford the motive and sustaining power by which the most complex and perfect of all machinery is maintained in a state of perfect integrity.

Does alcohol protect from contagion?

The most perfect state of physical health, that in which the organs perform their functions naturally, when each discharges its duty in faithful obedience to those physiological laws which a kind Providence has placed over the body physical, ensures the most efficient and successful resistance against the encroachments of disease. The successful military chieftain enforces that rigid, yet wholesome discipline, whereby the most implicit obedience is ensured. In anticipation of a collision with an approaching enemy, he marshals his forces, so that each division will act in concert, and with one grand object in view, to render reciprocal assistance

in repelling an attack. From a commanding position, with one sweep of his telescope, his practical and mathematical eye discovers the most vulnerable points of his army, and every faculty of his mind is brought into requisition in adjusting the whole into perfect harmony and symmetry. So with the animal economy. When this delicate organism is subject to such extremes of excitement and depression, at one time an important organ almost paralyzed by over stimulation and exertion, and at another from a deficiency of nervous energy, "the pestilence that walketh in darkness," steals upon the sentinels at the outposts, and victory perches upon his standard. The testimony of hospital reports, and the records of benevolent associations, physicians and surgeons, give ample confirmation to this lamentable fact.

Writes Dr. Carpenter: "The nurses in the cholera hospital at Manchester, were at first worked six hours, and allowed to go home the other six, and the mortality was so great among them that there were fears of the failure of a supply. It was found, however, that they were much given to alcoholic potations (with the idea probably of better resisting the malady,) during their leisure hours, and they were, therefore, confined to the hospital and debarred from obtaining more than a small allowance of alcoholic drink; after which, not a single case occurred among them."

In the history of the ravages of pestilence, whether yellow fever, cholera, or dysentery, all reports agree that the bacchanalian, the debauchee, or even he who is habitually accustomed to the daily use of alcoholic potations in considerable quantities, is among the first to fall beneath the scythe of the Destroying Angel. The mechanism of the human frame is so complex, yet so complete in all its arrangements, exhibiting such beautiful harmony and concert in the movements of its different parts, that at the same time that we adore the wisdom and beneficence of the Divine Architect, we wonder that it can be maintained in motion, for even the mean duration of human life, under an observance of the most rigid rules of health. In the processes of digestion, assimilation, secretion, and the reproduction of the tissues, any agent, the tendency of which is to interrupt the nice counterpoise between the assimilating and depurating organs, must necessarily derange the operations of the whole machinery. An excess of carbon in the blood, independent of the local effects of alcohol upon the stomach, and the general plethoric condition of the circulation, demands extra-

ordinary efforts on the part of the lungs, the liver, and the kidneys for the elimination of the poison, and the maintenance of the healthful functions of these organs. The insidious nature of this poison, stealthy in its march yet unerring in its aim, renders it peculiarly formidable. The case of Alexis St. Martin, upon whom Dr. Beaumont made some interesting physiological experiments upon the digestion of food, reads an instructive lesson:

Says, Dr. Beaumont—"St. Martin has been drinking spirits, for eight or ten days, pretty freely; complains of no pain nor shows symptoms of general indisposition; says he feels well and has a good appetite. August 1st.—Inner membrane of the stomach unusually morbid; appearance of inflammation more extensive, and spots more livid than usual, from the surface of which exuded small drops of *thick, clotted blood*. \* \* \* The gastric fluids extracted this morning were mixed with a large proportion of thick, ropy mucus, slightly tinged with blood. The free use of ardent spirits, wine, beer, or any intoxicating liquor, when continued for some days, *has invariably produced these morbid changes*."

Here, then, we have ocular demonstration of the morbid tendency of this agent. The subject complained of no pain, nor symptoms of general indisposition, excepting an uneasy sensation and slight tenderness over the epigastrium, and slight vertigo and dimness of vision on stooping down and rising up, and yet the mucous membrane was the seat of intense congestion, to such a degree, as to cause the exudation of blood upon its surface. When the inordinate use of alcoholic drinks has been habitual for a length of time, the mucous membrane of the stomach becomes thickened, the organ in a measure loses its power of contracting upon food, the pit of the stomach becomes distended, and malignant disease not unfrequently ensues. "It is incontrovertibly established by a collection of many facts, that this disease (cancer of the stomach,) is frequently brought on in those who become addicted to the inordinate use of spirituous liquor." (Cyclop. Pract. Med., vol. iv. p. 260.) The close proximity of the stomach to the liver, and the direct sympathy existing between them, persistent derangement in the function of the former almost necessarily involves that of the latter: hence, seated pain over the region of the liver, swelling, and entire perversion of the hepatic secretion, are frequently concomitant of gastric disorders. Constant irritation sometimes induces excessive enlargement of the liver, but most

generally it becomes hard, small, with few traces of blood vessels, and an entire arrest of the healthy secretion of bile is the necessary result. The experience of almost every physician will attest the depressing effects of alcohol in acute disease. External appearances may indicate the enjoyment of high health; the blood circulates with freedom through the capillaries, lighting up the cheek with the color of the rose, but it is carrying along with it a poison which is slowly consuming the vital energies. When disease attacks the internal organs, where are the innate recuperative powers of the system? Paralysed, as if by the weight of some unmovable incubus. The blood, deficient in oxygen, is deprived of its stimulating and health-giving influence. Depleting remedies, the most potent in states of high inflammation, are powerless, nay, directly injurious. The system succumbs from the abstraction of even a small quantity of blood, or under the operation of brisk cathartics, and disease, in a majority of cases, makes a triumphal march—with his victim an easy captive.

The inebriate transmits a desire for stimulants to his offspring.

Examples of hereditary transmission of disease occur within the observation of almost every one. Consumption, scrofula, insanity, deafness, and various other disorders, descend from one generation to another. Peculiarities of individual character in the parent are exemplified in the child. When the brain and nervous system have been the subject of such torturing persecution; at one time lashed into fury, and at another, sunk to the lowest depths of depression, is it wonderful that the offspring of such parents should inherit a weak and perverted nervous system—overthrown by the least unusual exciting cause, subject to spasms, convulsions, and falling readily into attacks of epilepsy or idiocy? Not only is this peculiarly delicate and irritable temperament transmissible from parent to child, but descends even to the third generation; and in many instances, where the influence of parental example has been withdrawn by reformation or death, even the subduing power of maternal affection, and the unqualified condemnation of society have proven entirely inadequate to extinguish the latent spark. In a report on Idiocy, by Dr. Howe,\* to the Legislature of Massachusetts, we have the following statistics: "The habits of 300 of the idiots were learned, and 145, or nearly one half are reported as known to be drunkards. Such parents,

\* Youmans, on Alcohol.

it is affirmed, give a weak and sickly constitution to their children, who are consequently deficient in bodily and vital energy, and predisposed by their very organization to have cravings for alcoholic stimulants." I believe that the records of hospitals for the insane, will exhibit comparisons equally as striking as the above. Within the field of his own observation, almost every physician can recur to the fact of whole lines of ancestry, extending through several successive generations, having been consigned to premature graves, if not by debauching and profligacy, by the exhausting effects of alcohol upon the physical system, causing them readily to fall a prey to acute disease.

But the most revolting condition into which the human body is brought, is, that which favors its spontaneous combustion. Many well attested instances are recorded, where the bodies of individuals, entirely isolated, and removed from any ordinary inflammable material, have spontaneously taken fire and been, at least, partially, if not wholly consumed. I am not aware that that peculiar chemical condition of the solids and fluids which predisposes to such a catastrophe, has ever been clearly and satisfactorily defined, but I believe that the victims have been in the daily habit, during life, of indulging liberally in the use of alcoholic stimulants.

Thus have we taken a cursory glance at a few of the effects of alcoholic stimulants upon man's physical constitution in a state of health. Their value, as remedial agents in a diseased condition of the body, cannot be questioned, but it would take us beyond the limits of our present purpose to protract this article to greater length.

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ARTICLE XXIV.

*Flesh Worm, (Filaria Medinensis.)* By N. S. WALKER, M. D., of Arlona, Putnam county, Ga.

Two years since, I saw and treated a singular case of what I at last pronounced a living animal, and perhaps of the above name. The history of the case is this:—

The parents seemed healthy, though in very indigent circumstances. The only child was apparently healthy, until about three months after its birth, when a small red speck was noticed

on the gluteal muscles, at or near the rim of the pelvis, which gradually enlarged, to the size of a small pea, of oval shape; and in about two weeks after its first discovery, it gradually began to elongate and to descend the thigh, making perhaps the distance of two lines a day at first, but gradually increasing in speed and in length. The cord-like object was well defined under the skin, and could be seen as well as felt.

The worm, as I shall call it, went on in a zig-zag course downwards, nearly passing around the limb, but mostly confined to the outer, and under surface. The anterior part, for perhaps an inch, was of a bright scarlet color, and grew paler upwards, until the skin, immediately over the track, assumed a dark yellow cast. The child showed symptoms of uneasiness, especially at night, when it was feverish and restless. When the head had reached the lower half of the leg, I cut across it in several places, and one cut was made half an inch from the head, and from this cut there oozed out a few drops of a light, thin, yellow fluid.

This operation, contrary to the advice of most writers, put a stop to the train, all, except the half inch, or more, of the head, which went on, though slower than formerly, and when it had reached the ankle joint, I again cut it up in small bits, but could not extract any part of it—though I did not persist in trying. This last operation put a final stop to it, and the skin assumed its natural color. At the time the worm was cut first, it progressed at least a half inch in twenty-four hours; and from the time it was first seen, until it reached the foot, there intervened at least four months.

This certainly must have been a Guinea worm, (*Filaria Medinensis* of the books,) and is altogether interesting, from its novelty in this country. The parents were filthy in their habits, and the floor of the house was of dirt. The length of the worm could not well be ascertained, as the latter end was not well defined, though I supposed it to be, at one time, at least ten inches long.

[Professor Richard Owen gives the following description of the Guinea-worm, which we append as corroborative of the above report:—"The Medina or Guinea-worm (*Filaria medinensis*, Gmel.) is developed in the subcutaneous cellular texture, generally in the lower extremities, especially the feet, sometimes in the scrotum, and also, but very rarely, beneath the tunica conjunctiva of the



eye. It appears to be endemic in the tropical regions of Asia and Africa.

"The length of this worm varies from six inches, to two, eight or twelve feet; its thickness is from half to two-thirds of a line; it is of a whitish color in general, but sometimes of a dark brown hue. The body is round and sub-equal, a little attenuated towards the anterior extremity. In a recent specimen of small size, we have observed that the orbicular mouth was surrounded by three slightly raised swellings, which were continued a little way along the body and gradually lost; the body is traversed by two longitudinal lines corresponding to the intervals of the two well-marked fasciculi of longitudinal muscular fibres. The caudal extremity of the male is obtuse, and admits a single spiculum; in the female it is acute, and suddenly inflected."—*Hunterian Lectures*, Lect. vi, p. 96.]—[EDTS.

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ARTICLE XXV.

*Treatment of a Case of Puerperal Convulsions by the internal administration of Chloroform.* Reported by JOSIAH BROWN, M. D., of Gaylesville, Alabama.

Wednesday, 24th December, 1856. Called to see Mrs. Grubbs at 7 o'clock P. M., age 19: good constitution, plethoric habit, and seven months advanced in first pregnancy. She had been suffering with headache a fortnight or more, accompanied with an cedematous condition of the lower extremities.

I found her in one of those horrible convulsions of the epileptic form, such as none but the most experienced physician can witness with any degree of composure. This being the first case of the kind with which I had ever met, and presenting, as I thought, many unfavorable and fatal symptoms, I resolved at once to put her upon a somewhat heroic treatment.

I first abstracted 40 oz. of blood, which did not appear to have the least effect in arresting the paroxysms; I then exhibited chloroform, by inhalation, as far as seemed judicious: all to no purpose—the spasms recurring with equal severity every twelve or fifteen minutes. It then occurred to me that I had recently seen a statement of its being given internally for Cramp Colic, with the most happy effects. The question suggested itself, why it might not be a safe and effectual remedy in this case.

After waiting from a half to three quarters of an hour, to observe the effect of what had already been done, I administered an ordinary sized teaspoonful of chloroform by the mouth, every two hours, until four doses were given. This had the desired effect—not a symptom of the convulsions recurring after administering the first dose.

Three hours after the last dose was given, Mrs. G. was delivered of a dead foetus. I then left for home, leaving a vial of chloroform, with directions to give a half teaspoonful every four hours, until four more doses were taken. Also, for her bowels to be moved by castor oil at night; after the action of which, 15 grs. Dover's powders to be given at one dose.

*Friday morning.* Again visited Mrs. G. Found her doing well; free from fever, bowels having been moved, and she was feeling very much refreshed by a good night's sleep.

This constitutes the whole of the treatment for this case, with the exception of five grains Iron by Hydrogen, which was given morning and evening, for ten days after; since which time Mrs. Grubbs has enjoyed excellent health.

[However happily chloroform, in the above doses, may have acted in the isolated case of Dr. B., we feel constrained to state, in connection with it, that our own experience has been rather against large doses, internally administered. On one occasion, we, by accident, gave a patient (a strong negro man) about  $1\frac{1}{2}$  teaspoonfuls of chloroform, for chloric æther; the effect was truly alarming—it required hours of the most energetic exertions, with emetics, cold douche and revulsives, to keep him alive; at the end of which time, he slowly recovered. Anthony, our own office servant, while suffering from cramp colic, during our absence, took one tablespoonful of chloric æther, which happening to be the concentrated preparation used in surgical cases, the effect was more alarming than in the above case, even to the apparent suspension of life. For nearly ten minutes of the time, he was without perceptible pulse and respiration was extremely embarrassed. Since these cases, we have a species of horror for large doses of chloroform, internally administered. It must be recollected, however, that the doses recommended by Doctor Brown were but one teaspoonful, while in our accidental cases, the quantity given was nearly double that amount.]—EDTS.

*On the Treatment of Scarlatina by the Diluted Acetic Acid.* By B. F. SCHNECK, M. D., of Lebanon, Pa.

During the past twelve or fourteen months a severe epidemic of scarlatina has prevailed in my neighborhood. Of 190 cases of the disease treated by me in accordance with the method recommended by our best authorities, I lost 1 in  $8\frac{1}{2}$  to 9.

Dissatisfied with this result, I was induced to try the diluted acetic acid as recommended by Dr. I. B. Brown, whose work\* I had the good fortune to meet with at the commencement of the present year. Of 60 cases treated subsequently by this plan, I did not lose one. The disease at this time had not undergone any abatement from its former violence; for among the sixty recoveries there were cases of such malignancy, as would inevitably have perished under the best directed previous efforts. It is true that two of the sixty afterwards died of thoracic and cerebral dropsy; and one, after a nearly two weeks' convalescence, from purpura hæmorrhagica, with epistaxis, hæmaturia, &c.; but these cases cannot be regarded as affecting the integrity of the plan in question. I am thus enabled to bear a flattering testimony to the success of Dr. B.'s method.

Many medical men, after unsatisfactory trials of all the ordinary modes of treatment, now declare that the less there is done for scarlatina the better. All such will be apt to think lightly of Dr. Brown's method; if, indeed, they do not condemn what they may choose to call his *nimia cura medici*. Let such rest assured, however, that this is a disease which, like weeds, flourishes most when least attended to; and further, that the character of medical adviser must be merged, for the time, in that of nurse also, to a certain extent, if his ministrations are to be successful. He should see his patients several times in a day—the oftener the better; and following the example of our author, he should even be found holding nightly vigils by the bedside, if the urgency of the case required it. The daily dressings of the fauces with caustic should, if possible, be made by himself; he should direct the frequency of the repetition of stimulants; and even the minutest details should ever be under his immediate cognizance. Thus fully occupied, although he may be able to take charge of fewer patients, he will save more lives; and only thus will he be able to realize the truth of the otherwise almost incredible statement of a friend of the author's engaged in extensive practice, who writes, "that the number of fatal cases occurring to him under this treatment did not exceed *four*." This gratifying result, it is the writer's firm conviction, will be the reward of all who will adopt and faithfully carry out the plan.

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\* On the Treatment of Scarlatina by the Acidum Aceticum Dilutum of the Pharmacopœia. By I. B. Brown, M. D., London, 1846.

**The following is a synopsis of Dr. Brown's views:—**

1. Scarlatina is always and essentially a disease of debility, or tending to debility, and not of an inflammatory nature. Its poison acts primarily and most fatally upon the blood, producing a dissolved, semi-vitalized and putrescible condition of that fluid; so that it possesses more serum and less fibrin than in its normal state. "Consequently the serum percolates, or is effused into the cellular tissue and cavities, through the coats of the vessels. Salines favour this dissolved state of the blood; but acetic acid prevents the separation of the serum from the fibrin.

2. Acetic acid is an excellent antiseptic; "it gives tone to the blood in scarlatina, and prevents the separation of the serum from the fibrin." It also "acts as an astringent upon the lymphatic system and serous membranes, and so effectually prevents dropsy."

3. It is a grateful refrigerant.

4. No medicine has a more decided influence in promoting digestion than this acid. We are further directed, while administering it, to "allow patients almost anything they fancy; it will seldom hurt them in severe and even dangerous disease."

These four points lie at the foundation of Dr. Brown's very simple and very successful treatment. The specialities of his method will not be given, as applicable to the several forms of the disease.

Whatever may be the type, he prepares the system for the acid, by giving

1. *An aperient* of 3 to 5 grs. of calomel, to be followed in two hours by castor oil. *All saline aperients are condemned*; "salines favour a dissolved state of the blood." If from great gastric irritability, the oil is rejected, he recommends an *aperient mixture* (rhubarb and magnesia,) *which contains no saline substance.*

2. Apply a piece of flannel round the throat from ear to ear, saturated with soap lin. f 3j; camphor lin., laudanum, aa 3ij.—M.

3. After the operation of the oil, give—for a patient nine years old—distilled vinegar, *diluted*,\* f 3j; syrup f 3iv; distilled water f 3iv.—M. Two tablespoonfuls every four hours. This mixture is to be continued throughout the entire duration of the case, whatever the form of the disease; and for one or two weeks afterwards, or until desquamation is well over. "It acts as an astringent upon the lymphatic system and serous membranes, and so effectually prevents dropsy."

4. Whenever, in scarlatina simplex, there is slight delirium in the beginning, with a *thick, viscid phlegm on the tonsils*, apply daily—nitr. silver grs. x; distilled water f 3j.—M. You thus prevent s. anginosa. If the throat require it, a linseed poultice may be placed over the flannel, and kept there constantly.

\* R.—Distilled vinegar, offic., one part; water seven parts.—M.

5. On the third or fourth day, in simple cases, allow mutton-broth.

6. As soon as desquamation comes on, order a warm bath or two, and keep the patient strictly in bed during the whole process.

*S. Anginosa*.—Here the treatment is the same, except that the caustic must be used more frequently, and the proportion of acid in the solution must be increased. A good rule is to increase the strength according to the violence of the attack, in bad cases giving it as strong as the patient can take it. Poultices to throat. Should symptoms of adynamia come on, give arrow-root, with a spoonful of brandy in it; add comp. sp. ether to acid solution; wash face, hands, legs, and chest with tepid vinegar ( $\frac{1}{3}$ ) and water ( $\frac{2}{3}$ ). If restless at night, give tinct. hyoscyam., or ( $\frac{1}{4}$ ) to ( $\frac{1}{2}$ ) gr. morphia, according to age. The decoction of bark may also be added to the acid mixture. Whenever, in *s. anginosa*, symptoms of adynamia come on, dress the throat frequently with caustic, and increase the quantity of acid from day to day; you thus prevent *s. maligna*.

For adults, in cases partaking of the nature of *s. maligna*, the following formula is given:  $\mathcal{R}$ .—Distilled vinegar  $\mathfrak{f}\text{3iv}$ ; syr. red poppies  $\mathfrak{f}\text{3iv}$ ; distilled water  $\mathfrak{f}\text{3iv}$ .— $\mathcal{M}$ . One-fourth part to be taken every four hours.

In *s. maligna* the same course of treatment is to be pursued; calomel, oil, caustic, acid mixture (strong,) liniment or sinapism to throat, followed by poultices; brandy or port wine every four to six hours, with arrowroot, beef tea, or mutton-broth; morphia at bedtime, or whenever restless, and sponging with tepid vinegar and water. All the bed furniture, carpets, &c., to be removed from the room, and chloride of lime to be sprinkled about the floor. During desquamation, the patient is not to sit up at all. Give at this time one or more warm baths. Use wine and brandy in *s. maligna*, even in the febrile stage; when combined with the acid, which so powerfully assists digestion, no harm will ever accrue from their use.

This is a brief statement of Dr. Brown's views and practice in this terrible malady. To the work itself we must refer for a number of valuable cases, illustrating most happily the treatment which he advocates, and interspersed with many highly practical remarks. I cannot help transcribing at length, as a fitting close to this portion of the subject, the following observations, which I have copied from his work:—

"Very much depends on careful watching in this disease; there is always in one or the other of the stages, a *critical moment*. For instance, in the eruptive stage, even in *s. simplex*, delirium will come on, and the throat will become more clogged with viscid secretion in a few hours; and if attention be not promptly given, and this phlegm, which impedes free respiration, be not removed, the delirium and laborious breathing will in-

crease, and the disease will soon run into the second or anginose form. In this case, the throat must be promptly cleansed, and some gentle nourishment be given. Again, in a anginosa, it will not seldom happen that the tonsils and fauces will suddenly become worse, or great sickness or sudden prostration will come on; now, unless the throat be instantly attended to, delirium, laborious breathing, difficult deglutition, and restlessness will make serious ravages upon the patient, and all remedies will quickly become unavailing; or where sudden prostration should arise, then we must promptly and unsparingly administer stimulants and cordials till the pulse exhibits more steadiness and power."

The practical importance of these directions cannot be over estimated. As assisting the cleansing of the fauces from viscid secretions, I have, for several years past, been in the habit of injecting the diluted chlorinated soda into the nares, with the happiest effects. Extensive ulceration, not only of the posterior nares, but of the entire nasal tract, with an abundant secretion of a peculiar tenacious mucus, are an attendant on every bad case; and these passages cannot be long obstructed without great distress and imminent danger. The daily or bi-daily injection of Labarraque's solution, therefore, while it effectually clears away the obstruction (as any other liquid would as well,) exerts besides an alterative and healing influence upon the ulcerated surface itself; and it *destroys*, while it removes, the morbid products which, if swallowed, as they are otherwise sure to be, disturb so seriously the intestinal canal; and last, but not least, it corrects the fetor which is so disagreeable a concomitant of such cases. So signal is the relief derived from this procedure, that, unpleasant though the sensation must be, I have seen the little patients, instead of shrinking from the operation, instinctively court the repetition of it, and if old enough, ask for it. It is a measure which, in the class of cases referred to, cannot be dispensed with, without loss. But as it may happen that a considerable quantity of the injection may be swallowed, and the blood be thereby impaired, it will be proper always to precede or follow the injection with a strong dose of acetic acid, so as to neutralize the saline ingredient.

The preparation of the acetic acid solution may be varied somewhat from the formulas given above, and so simplified, without in the least affecting the result. Instead of first diluting the concentrated acid to the strength of vinegar, and then using the dilution for the preparation of the solution, I have been accustomed merely to add from f3j to f3iv of the officinal acid to f3iv water and ordering a tablespoonful every few hours, sweetening at the time of administering it. We must, however, never forget to increase the strength in proportion to the threatening nature of the symptoms.

In the use of stimulants, also, a little license has been taken with our author's directions. Having ventured upon the guarded employment of brandy, beef-essence, &c., as a precautionary step,

earlier in the attack than he allows, without detriment, I now administer brandy in graduated doses, two or three times a day *from the beginning* in the malignant form, or on the second or third day in anginose cases; and I have seen no reason to regret this course. If the tongue becomes red like a strawberry, with the papillæ as large as a pin's head, or on the contrary, brown, dry, fissured, with sordes on the teeth; and if there be, besides, a recession of the eruption, a pulse fluttering and not to be counted, or even delirium, "then we must unsparingly administer stimulants and cordials, until the pulse exhibits more steadiness and power." Carb. ammonia, quinia, and even capsicum, have here all failed me; this last having proved alike ineffectual as an arterial stimulant, and as a local application to the fauces.

If scarlatina were an inflammatory disease, as the advocates of bleeding and antiphlogistics would have us to believe, such a stimulant course could not fail to result disastrously in nearly every instance; but the reverse is actually the fact. The violent excitement in severe attacks, as indicated by burning skin, rapid pulse, delirium, etc., is not an evidence of phlogosis, but of irritation. And when death takes place in such cases, it is not so much from inflammatory disorganization of any vital part, as from sheer exhaustion; the inevitable consequence of the excitement into which the system had worked itself, in its vain struggles against the fatal poison which was oppressing it.

Dr. Brown's silence in regard to the use of emetics is a significant fact; although more celebrated authorities than he, recommend them highly. Their adoption at all, as part of the treatment, was probably suggested by the nausea and vomiting which almost always usher in the attack; under the supposition of the presence of acrid ingesta, which they were designed to remove. It may be, that when the mildest article is selected, solely with this view, they may do no harm; but when administered indiscriminately, fatal results must occasionally follow the practice.

Dentition, improper food, the hot months, and a hereditary predisposition, may all, in scarlatina, favor the occurrence of serious gastro-intestinal disease, from the least exciting cause; and an emetic, especially if containing tart. antimony as advised by some, may be this cause. In the month of July, 1856, I was called to see a child aged twenty months, ill with *s. anginosa*, running into *maligna*, with scarcely any eruption. Notwithstanding the child had vomited, an emetic of ipecacuanha with calomel was given, after a warm bath; to be followed by *sp. nitric ether* and bicarb. soda in solution, with capsicum infusion. The vomiting became unmanageable, attended with a copious diarrhœa; gastritis supervened, with peritonitis and enormous abdominal distension; and on the fourth day the child died in convulsions. The emetic most probably had killed it.

What, let us ask, does the gastric irritability of this disease

mean? Is it not the first appreciable alarm given by nature of the introduction of the poison, and an ineffectual attempt on the system, to get rid of it at the outset? But as the morbid matter is introduced, and the blood saturated with it, many days it may be before it actually develops itself, how can we expect emesis, whether spontaneous or artificial, to dislodge it? If, instead of vomiting, scarlatina began with diarrhœa, would we be justified in giving an active purgative, with the same object? Assuming Dr. Brown's view to be correct, would it not be malpractice to bring to bear the depressing effects of a nauseating emetic upon a disease whose tendency from the beginning is towards debility? The unfortunate result above related has convinced me that the use of emetics, as a matter of routine, is fraught with great danger; and that their employment is indicated in very few, and very special cases, if at all.

The following cases, representing the worst forms of *s. anginosa* and *maligna*, are selected out of a number of similar ones, from my case-book, as illustrating the gratifying success of the acetic acid treatment, even when under the most unfavorable circumstances.

CASE I.—Dec. 27, 1856. Saw a girl of Jos. Heilman, aged 13, in an attack of *s. ang. threatening maligna*. On the evening of the 28th, found more fever, very frequent, angry pulse, constant sighing and heaving of the breath, with increased pulse of heart. Suspicion of pericarditis, and tempted to bleed. Concluded to postpone till next morning; ordering sinapisms to extremities, and dose calomel. Was prevented from seeing her until next day towards evening.

29th. Pericarditis now clear. Bled viii. oz.; epispastic to left chest; cal. and op.  $\text{aa}$   $\frac{1}{4}$  gr. every 2 hours; sinapisms to extremities. Eruption well out. Teaspoonful brandy at one, to be continued 3 or 4 times a day, with beef essence.

30th. Effusion around heart; impulse scarcely perceptible to hand, or audible; at times delirious; eruption well out; slight epistaxis. Inunction with mercurial oint., and same to blister. Continue remedies.

31st. Morning. Pulse more full, and a shade lower; impulse of heart more perceptible, and less muffled; had 3 or 4 evacuations. Continue treatment, with alternate doses of pulv. scillæ and digital.,  $\text{aa}$   $\frac{1}{4}$  gr., cal.  $\frac{1}{4}$  grain.

Evening. Cardiac trouble decidedly better; but alarming prostration, from epistaxis to the extent of a pint. Partial coma; tongue dry, and papillæ very much elevated; four alvine discharges. Cold cloths to head and neck; Dover's p. 3 grs., digital.  $\frac{1}{4}$  gr., acet. lead  $\frac{1}{4}$  gr. every 2 hours (having omitted former powders); 10 drops elix. vitrioli every 2 hours. Sinapisms to extremities; iced lemonade for a drink; may die to-night.

Jan. 1, 1857. Morning. Bled a pint or more at two several times, to-night; extremely exhausted; but one dose of the medicines ordered last evening was given; family expecting her death hourly. This being contrary to my express orders, I at once directed a resumption of the treatment, including brandy and essence of beef.



Evening. Has taken remedies all day; no bleeding. Pulse a little fuller, and slightly slower. Tongue dry, and covered with crusts of blood. Eruption apparently about to decline on upper part of body, but well out on lower extremities. Continue treatment, at three hours' interval.

2nd. Noon. Pulse a little slower; circumscribed flush on each cheek; face sunken; tongue very dry; skin dusky, and whole case *typhoid*. Turpentine emulsion and elix. vitriol, with beef essence, and brandy and milk.

3rd. Tongue a little more moist. Continue remedies.

4th. Improving; pulse a little slower. Will recover.

5th to 6th. Has great appetite. Slowly convalescent.

*Remarks*—Bleeding, in scarlet fever, is not necessarily an injurious measure, especially if its otherwise depressing effect be guarded against, immediately afterwards, by suitable doses of stimulants and nourishment. In this instance, the venesection most assuredly saved life, by moderating and favoring the resolution of the cardiac inflammation; which, although it had gone on to the effusion of serum, was nevertheless relieved by it, and by the subsequent use of squill, digitalis, and calomel. The recession of the eruption, which might otherwise have followed the bleeding, was also prevented by the prompt administration of small doses of brandy. In a similar case of pericarditis in the course of scarlatina, I should feel emboldened to bleed largely, giving stimulants and beef-tea generously, immediately afterwards, as the only mode promising success.

CASE II.—*S. Anginosa running into Maligna*.—Dec. 30, 1856. Girl of Geo. Strohm, aged 4 years. Vomiting; very rapid, irritable pulse; eruption of a vivid red colour; tonsils greatly enlarged, and covered with lymph exudations. Solid caustic to throat; cal. oil, and strong acid solution.

Jan. 1, 1857—Morning. Symptoms of great malignancy; fauces of a dark purple hue; face mottled with *white* patches, where the eruption showed a disposition to recede; excessive restlessness all night, getting out of bed in the delirium; surface of an intensely deep red colour; pulse rather feeble, and slow. Solid caustic to throat; sinapism externally, to be followed by poultices. Teaspoonful of brandy every five or six hours, if not gone to sleep. Beef-essence; acid solution stronger.

Evening. Has slept some hours; face more uniformly red; pulse more frequent; surface hot. Sol. 10 grs. nitr. silver to 3j water, to fauces twice a day; chlorinated soda injections into nares. Continue remedies.

2nd. Same as last evening. Comp. camph. lin. to throat, which is much swollen; caustic, injections, brandy, and beef-tea.

3rd. Desquamation already beginning on different parts of the body, being only the fifth day—a bad sign. Continue remedies.

4th. Throat very much swollen externally; tonsils deeply ulcerated; case very malignant; sinking, and very restless; surface pale and cool.

10 P. M. Was sent for; supposed to be dying. Prognosis very bad. Solid caustic to throat; injection into nares; brandy every two or three hours, and continue remedies.

5th. Pulse a shade lower. Family did not attend to throat this morn-

ing. Applied caustic at once, and injected chlor. soda into nares, bringing away large masses of viscid secretions, with great relief. Quite rational.

6th to 10th. Pulse slower. Gradually convalescent.

*Remarks.*—This case exhibited what I have repeatedly seen in this epidemic—a succession of pure white patches in the midst of the eruption, on the face most generally; appearing in the course of a few minutes, and persisting sometimes for half a day, or longer. Having met with this symptom only in cases of a malignant character, with a cool skin, and other signs of adynamia, I have come to regard it as an indication for the prompt use of stimulants.

The early occurrence of desquamation in this case—on the *fifth* day of the eruption—is also worthy of note, as indicating great pravity of system. In September, 1856, I met with a case in which desquamation began, all over the body, in extensive patches, on the *fourth* day of the eruption. The skin was as though it had been seethed or scalded; the cuticle separating first at the points of pressure from the motions of the patient, incident to her changes of posture in the delirium—as the elbows, hips, etc.—but finally coming away wherever the clothing lay in contact with it. These denuded surfaces were literally raw; when recent, serum standing upon them in minute drops. The patient, a girl of 15 years, died rapidly of pericarditis.

CASE III.—*Purpura following S. Anginosa and Maligna.*—Feb. 23rd, 1857. In this instance, as in a considerable number of others in this epidemic, I observed that the eruption on the arms was most fully out along the course of the nervous trunks, there being a broad belt, of an intensely red colour, in the line of the blood-vessels and lymphatics, from the hand to the axilla. Having never seen this symptom noticed, and having observed it only in the worst forms of the disease, I have been led to regard it as indicating either phlebitis, or inflammation of the absorbents, and, as such, a serious complication of the case. The details of this case are very similar to those previously given, and hence need not be gone over. It is sufficient to say that the child recovered with the greatest difficulty; but by the end of the first week of March he was clearly convalescent, although greatly reduced, and *very pale*. He, however, took nourishment, with acid mixtures, and it was hoped he would do well.

March 13th. I was informed this morning that his mouth bled slightly, and that the blood appeared to ooze from the gums. Sent him tincture chlorid. iron, and saw him in the afternoon. Found that epistaxis had set in; the blood looking pale red in colour, like a mixture of currant-juice and water. Purpura patches had appeared over the whole of the lower extremities. Prognosis very unfavorable. Beef-essence and elixir vitriol at short intervals, alternating with sol. potassio-tartr. iron.

14th. Getting worse rapidly. Purpura on arms and breast. In the course of the day, vomiting of coagulated blood, which had evidently passed into the stomach from posterior nares. Vomiting continued; everything was rejected; and in the afternoon, after having passed some bloody urine, the child died, perfectly blanched.

*Remarks.*—This case is interesting, as confirming, to some extent, Dr. Brown's views of the pathology of scarlatina. Here was, first, a deficiency of red globules in the blood, as was evident from its pale red colour. We infer, also, an increased tenuity in this fluid, as manifested by the hemorrhagic tendency, and which may have been caused either by a deficiency of fibrin, or a preponderance of serum, from paucity of red corpuscles. However we may explain the morbid result, the occurrence of purpura is almost inexplicable under the constant administration of the strongest nourishment and acid solution, unless we admit the coexistence of the scarlatina poison, acting upon the blood to bring it into this dissolved state. At least, this was not congestive or inflammatory purpura.

Would it not be advisable, in every case of *s. anginosa* and *maligna*, especially the latter, to administer, as soon as the disease has subsided, and desquamation is beginning, a mild preparation of iron? Might not the fatal termination in this case, perhaps, have been averted by the earlier employment of a ferruginous tonic? Further, would not also the iron, by increasing the crisis of the blood, lessen the chance of dropsy? Or, on the other hand, would the iron be capable of increasing the tendency to dropsy, by rendering the blood inflammatory, and so favoring the renal disease, which is so prominent a symptom (if not the cause) of the dropsy? This is quite possible, regarding, as I do, the condition of the kidney in the dropsy of scarlatina as a real, though temporary, acute Bright's disease.

Supposing, however, as does Dr. Brown, that the watery condition of the blood after scarlatina is the cause of the effusion, how can we reconcile with this the benefit derived from venesection in dropsy? If this supposition be correct, are we not, by the abstraction of blood, and the consequent still further impoverishment of that fluid, increasing the tendency to effusion? Instead of which, we find the swelling mostly soon to disappear rapidly after blood-letting. At least, such has been my experience, repeatedly, in bad cases of cerebral and cardiac dropsy; and Watson, in similar cases, gives bleeding his unqualified approval.

These facts militate strongly against the causation of dropsy, as explained by Dr. Brown. For the present, then, we know of no solution of the difficulties presented to us above, and must be content to follow apparently opposite indications, if correct and successful, without being able to reconcile differences.

CASE IV.—*Scarlatina in Childbed. Scarlatina Neonati.*—On the 2nd of July, 1856, I was requested to see the wife of Fred. Schaffer, in an attack of *s. anginosa*. She was at the end of her pregnancy, and expected her confinement daily. Both of her children had both passed through a severe attack of the disease, and she had been their only nurse. Knowing the disastrous consequences to be apprehended from scarlatina during con-

finement, I undertook the case with no little anxiety. On the 4th, the premonitory symptoms of labour appeared, which I treated with anodynes, hoping to put off the evil day as long as possible. Moreover, dreading the exhaustion which would be likely, in such a case, to follow the excitement of labour, and still more the debility consequent upon the lochia, (which would act as a drain upon the system,) I sought to prepare the patient for the crisis by moderate doses of carbonate of ammonia, serpentaria, and beef-essence. By a cautious use of opiates, the labour was kept off until the afternoon of the 6th, when the woman was delivered of a mature female child, which, however, lived only three or four hours. This child was covered from head to foot with the eruption, of an intensely red colour; and, lest I might have mistaken the naturally florid colour of many newly born children for scarlatina, I examined the fauces, and was surprised to find prominent anginous symptoms, and the soft palate thickly studded with red points. The infant soon became cold, and the eruption changed to a purple hue, which, before death, gave place to an almost indigo colour.

My precautions in regard to the mother proved to be well-timed. In addition to the supporting plan adopted before confinement, she now bore well a generous supply of wine. She made a good recovery; but, a week afterwards, was attacked with subacute rheumatism of the wrists, which yielded to Dover's powders and vinum colchici.

*Remarks.*—Ramsbotham, in his work on Parturition, highly recommends a stimulating and supporting treatment of the scarlatina of puerperal women, as the only method likely to prove successful; and the above case is interesting, as confirming not only his own views, but also those of Dr. Brown. Morris, in his *Lectures on Scarlet Fever*, says that "to pregnant and puerperal women it is almost inevitably fatal. I have known several cases which proved mortal, but never heard of a recovery."

These cases, from my own observation, must suffice for my present purpose. They confirm and correspond with, Dr. Brown's teachings and cases very fully; and this correspondence between two epidemics thus widely separated as to time and space is certainly more than a mere coincidence. It seems to indicate a certain general principle, which underlies, and so essentially determines the nature of this, as of every other affection, through all the variations of climate, locality, and prevailing type of disease. Whether this principle, which Dr. Brown professes to have discovered as regards scarlatina, be the correct one, can only be determined after extensive and frequently repeated experiments.

Finally, to all the evidence adduced by Dr. Brown in favor of the preservative effects of acetic acid upon the blood, it is proper to oppose the testimony of our best American authority, as to its injurious effects in large and long-continued doses. Dr. Wood, in his *Therapeutics*, says that, thus administered, besides producing gastric and intestinal irritation, "it lowers the organic functions of the system generally, impairing nutrition, depraving the blood, producing anæmia and emaciation, and ultimately, it is said, in-

ducing a condition analogous to the scorbutic." The same writer refers to its liability to develop the tubercular diathesis, when taken habitually, as it sometimes is, with a view to obviate fatness. Whether, and to what extent, Dr. Brown's use of the article should be considered toxic, it would be difficult to say; but probably the diluted state in which it is given, and the comparatively short time that it is administered, will save it from being so regarded, except in so far as many of our best remedies are poisons in over-doses.—[*Amer. Jour. of Med. Sciences.*]

### Syphilization.\*

Two or three years ago, a bold young French physician startled the grave deliberations of the *Patres Conscripti* in the French Academy of Medicine, by the announcement of his having discovered a new method of the treatment of syphilis, with which he proposed to extirpate that wide-spread malady from our nosology. Not only did Auzias Turenne aim at the cure of syphilis in persons already affected with the disease, but he shocked morality by the proposal to render individuals hitherto untainted with syphilis totally unsusceptible of the venereal virus. The French Academy of Medicine met, and an acrimonious discussion ensued. The moral and hygienic objections seem to have been those which were discarded upon; the facts do not seem to have been very carefully inquired into; no experiments were made to test the truth or falsehood of the new mode of treatment, and under the powerful influence of Ricord it was rejected by the Academy, in spite of the protest of Malgaigne and others against this summary decision. In this country, the subject seems to have excited very little interest. One or two journals briefly alluded to it in terms of unqualified condemnation, and the only notice of the controversy from an impartial point of view is given in "Ranking's Abstract of the Medical Sciences," p. 333, vol. xvi., by Dr. Radcliffe. Since then, with the exception of two papers by Victor de Méric, in the "Lancet" for 1853, no notice has been taken of the subject, and the medical public in this country seem to regard the question as finally settled by the fiat of the French Academy. Not so, however, our brethren on the continent. In Norway, in Sweden, in Turin, and elsewhere, the bold empiricism of Auzias Turenne has been carefully put to the only test capable of deciding the question at issue—viz., that of experiment. Not content with merely declaiming against syphilization as unheard-of and unjustifiable, Professor Boeck in Christiana, Danielson in Bergen, Carlsson in Stockholm, and Sperino in Turin, have for some years past been engaged in a series of careful

\* This article, so extraordinary in its facts and doctrines, consists of brief extracts, which however will be sufficient to develop the fundamental, and it may be added, almost incredible principles recently deduced from numerous experiments made by a gentleman of distinguished reputation and reputed competency.—Ed.

experiments and observations to determine the truth or fallacy of Turenne's practice. It is plain that experiment alone can decide the question; theory here is but of little avail, and would be of no more use in disproving stubborn facts—if such they really be—than if it were directed against the efficacy of mercury in primary syphilis, or of quinine as an antidote to ague. The French Academy seems to have rejected the practice of Turenne without putting it to the proof; indeed, as we observed before, the moral question alone was tried, and found wanting, while the actual facts seem hardly to have been discussed at all.

Auzias Turenne, a young French physician, commenced about the year 1844, a series of experiments, with the view of testing the validity of John Hunter's doctrines of the non-communicability of syphilis to the lower animals. After many experiments and several failures, he succeeded in producing in monkeys inoculated with chancre matter a disease which had all the characteristics of true chancre. This was at first admitted in the French Academy, but at a latter period was denied. However this may be, it is quite certain that a contagious disease was communicated to the poor animals, and that from these it was transferred to rabbits, cats, and horses. The malady was again from these returned by inoculation to the human species, the first trials in this regard having been made by Dr. Robert Weltz, of Würzburg, on his own person. On four separate occasions, Dr. Weltz succeeded in producing an unmistakable chancre on his own person, by inoculation from animals, and this was acknowledged even by Ricord.

While Auzias Turenne was thus engaged in researches on the transmission of syphilis to animals, he became aware of the curious fact, that each succeeding chancre produced by inoculation became less and less in each animal, until at length a period arrived when inoculation apparently lost all its power, and no chancres or sores of any kind followed the application of the venereal virus. From these facts he drew the inference, that by prolonged inoculation with the syphilitic poison, a constitutional state or diathesis was at length produced in which the system was no longer capable of being affected by syphilis. This condition he terms "syphilization," and upon this asserted discovery all the subsequent experiments and peculiar mode of treatment are based. Auzias Turenne and his followers contend that by such a process of prolonged inoculation the system becomes protected for the future against the venereal poison, just as an individual who has had small-pox cannot take the disease a second time. To obtain perfect syphilization or immunity, the individual must undergo constitutional syphilis; but he must be forced rapidly through this disease by repeated inoculations, in order that it may not injure the constitution.

The abortive experiments of Diday in 1849, require but little notice. He proposed to inoculate with blood drawn from a person laboring under tertiary syphilitic symptoms, so as to prevent, as he

imagined, the poison from entering into the constitution at all. Although this proposal was apparently based on one of Ricord's supposed "laws"—viz., that constitutional syphilis never affects an individual but once in his lifetime, it was also in direct contradiction with Ricord's positive opinion, "that tertiary syphilis could not be communicated by the parent to the child." After a series of experiments, Auzias Turenne's doctrines were laid before the French Academy of Medicine (November 18th) in 1850; and as might be expected, opinions so novel and so startling met with the most vehement opposition. Turenne had, it seems, only recently commenced at that time his experiments on syphilization in the human subject; he had, therefore, few or no data for the support of his opinions, and he not only proposed to employ syphilization for the primary and secondary forms of venereal diseases, but suggested the use of this treatment as a prophylactic against the contagion of syphilis in persons as yet untainted with that malady. It was upon this latter point that the discussion mainly turned, and here the indignation of his opponents was unbounded at the audacity and immorality of such a proposal. We cannot deny that they had right on their side; the proposal was not only immoral, for the disease is one to which an individual voluntarily subjects himself by a lapse from the rules of morality, but it was also most injudicious to subject a perfectly healthy person to the danger of incurring a malady from which he might never again be able to free himself. The true mode of determining the question—that of experiment, carefully conducted and often repeated—was not adopted, and an application by Turenne for leave to prosecute his researches in the Hospital St. Lazare was negatived by the Commission. Hitherto, not being permitted to pursue his investigations in a hospital, he had only experimented on a few cases in private practice, and these were necessarily too few and too scanty in the details to be implicitly relied upon. The real question at issue, that of the reality or non-reality of syphilization, was left untouched. Malgaigne, Depaul, and others in vain protested against the sweeping condemnation of these proposals before the truth or falsehood of the doctrine had been determined by experiment; the great influence of Ricord and his partisans prevailed, and the proposals by Auzias Turenne were unequivocally condemned. Shortly after, a strong case appeared in favor of the opponents of syphilization, in the person of a Dr. L——, who had allowed himself to be inoculated to produce syphilization, and was now covered with venereal sores. While matters thus proceeded in Paris most unfavorably for the advocates of syphilization, the question was being investigated on a large scale, and in a more complete manner, by Sperino of Turin. This physician had great advantages for the prosecution of his researches, as he was attached to the Syphilicomo, or Venereal Hospital, of the city of Turin. He had long remarked that large suppurating buboes healed more rapidly when their syphilitic character was tested according to Ricord's

plan, by inoculation of the surrounding parts; and moreover, that when the primary chancres were large and obstinate, the inguinal buboes were smaller and less freely developed. The longer the local disease lasted, the less chance there seemed to be of constitutional syphilis. Sperino made his first report on the subject to the Medico-Chirurgical Academy of Turin on the 23d of May, 1851. In this report he gives the full details of fifty two cases treated by him in the Syphilicomo of that city. If Sperino was not the first to employ syphilization for the cure of venereal disease in the human subject, he at all events first performed a regular series of experiments and observations to test the truth or fallacy of Turenne's doctrines.

"The subject of M. Sperino's experiments were fifty-two hospital patients, all prostitutes, and all suffering from aggravated forms of primary or secondary syphilis. The virus was taken from the person syphilized, or from a comrade—from the first if possible. The inoculations were repeated once or twice a week in three or four distinct places, usually in the abdomen. The time required for the establishment of the artificial chancres was from two to three days. The effects of the second inoculations were less serious than the first, the third than the second, the fourth than the third, and so on, until the virus ceased to produce any effect whatsoever; contemporaneously with which epoch all former ulcers had healed, and buboes, recent nodular enlargement of bones, and cutaneous stains or blotches, had either disappeared altogether, or were rapidly going away."

The virus also, which made no impression at that time, was found to retain all its virulence when tried on an unprotected person.\*

Sperino's observations were confirmed by similar results obtained by Dr. Gamberini at Bologna, and by Gulligo at Florence. The report of the Commission appointed in this case, as at Paris, was unfavorable, but it did not extend to the prohibition of further experiments, and Sperino has ever since followed up this treatment in the hospital under his charge. In 1853 he published a detailed account of ninety-six cases of syphilization in a bulky volume of 903 pages. \* \* \* \* \*

Not only are certain cases ill fitted for syphilization from previous mercurial treatment, but the state of health of the patient must be taken into consideration before submitting him to this prolonged and painful treatment. Dr. Boeck advises that we should not syphilize when any inflammatory diathesis exist in the system, as in such cases the artificial chancres may take on a malignant action. Habitual spirit drinkers, and persons of very weakly constitution, should not be subjected to this treatment. The bowels should be regulated, and the digestive organs should be brought into good order: but it is not necessary to enforce any strict rules of diet. In

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\*See Dr. Radcliffe's Report on Surgery; Ranking's Abstract, vol. xvi, p. 334.



the hospitals of Bergen and Christiania, the ordinary full diet of the hospital was always allowed. With regard to obtaining the patient's consent to the treatment, no difficulty seems to be found either in the Scandinavian or the Italian hospitals. Both Sperino and Dr. Boeck mentioned the readiness with which patients submitted to, and even sought for the mode of cure which they had seen to be so successful in their fellow sufferers.

Various methods of inoculating the venereal virus have been adopted by the advocates of this system. Auzias Turenne at first kept up a succession of single chancres; while Sperino made three or four separate inoculations at once, and repeated these two or three times in the week. After having in this way reached the number of twenty-four or thirty inoculations in all, he found that the chancres last produced were exceedingly small, and he then diminished the intervals, and made more inoculations at each sitting. He found that the first chancres were deeper, larger, and more inflamed than those which succeeded them; and that by diminishing the intervals and increasing the number of inoculations, the earliest chancres visible diminished, and were less painful and inflamed. To test this still further, Sperino ventured upon as many as sixty inoculations at once upon the same individual; but the result obtained was that *immunity* to further inoculation set in before the syphilitic symptoms were cured, and relapses of the disease frequently ensued. He therefore returned to his former plan, and now inoculates for six to ten chancres at each sitting. While these chancres are progressing, it is neither necessary nor advisable to inoculate afresh, nor should this be done until the former chancres are developed. Should the chancres be developed too freely, and threaten to produce active inflammation, or to extend as phagedænic sores, he checks their progress by inoculating afresh at shorter intervals.

The practice of Dr. Boeck differs very little from that of Sperino. At first afraid of producing too serious an impression upon the system, Dr. Boeck inoculated for two chancres only every six days, selecting that period of time, because he found from experience, that it required about five days to produce induration in a chancre; although he does not, as we have already seen, consider this latter circumstance absolutely essential. Subsequently he has shortened his intervals to three days, and increased the number of inoculations to eight or ten. Less time is thus required to produce immunity; but Dr. Boeck has a wholesome distrust of those cases which are pushed too rapidly through their course of syphilization.

With regard to the most favorable points in the body for inoculation, Sperino placed his punctures on the lower part of the abdomen, while Dr. Boeck prefers inoculating on the arms and thighs. Accompanying each of his observations in the volume before us is a lithographed outline plate of the human figure, with the points of inoculation, and the date of each; while lines drawn from the arms

to the thighs enable us to follow the transpositions of the virus from one chance to another. By this simple figure it is easy to trace the progress of the treatment, to see the number of inoculations at each sitting, and the source from which they are derived. \* \*

We think that the advocates of syphilization have established a claim on the profession to a fair trial of their system. It is evident that its employment is not fraught with danger, as is the case with so many remedies proposed from time to time; and the investigation of the subject seems to open up a new field for the further study of one of the most malignant and most lasting and destructive poisons that affect the human frame.—*Brit. and For. Med. Chir. Rev.* for April 1857.

*Professor Boeck on Syphilization.*—If it be evident, as I think it is, that the remedies hitherto used against syphilis are uncertain, and even pernicious, then it is not only allowable, it is our duty to try the new one that is offered to us. To me the only question was—in what cases syphilization might be used. I have already mentioned that I always thought *prophylactic* syphilization to be an absurdity. Therefore, I shall not dwell any longer on it. The question is—whether syphilization ought to be used in all cases where syphilis exists? This question is easily answered. I cannot predicate with certainty if all those who get primary syphilis will get constitutional disease. The simple chance is not in general accompanied by any constitutional affection. The Hunterian one is certainly a consequence of a constitutional syphilis, but we may easily deceive ourselves in respect to the induration. Therefore, I never use syphilization where there is merely primary syphilis. It is not until the constitutional symptoms have appeared that I consider this method allowable, for then I am convinced that I do not introduce anything into the organism but what is there before. I cannot double a malady already present. So I am quite certain not to do any harm to the patient.

This may be the fit place for mentioning shortly how I produce syphilization. Without any other preparation than a bath, or in my private practice even without this, I apply on each thigh, and on each arm, or on the sides only, three inoculations in every one of those places, with matter taken from a primary ulcer, or from an artificially produced one in a person who has been syphilized. I choose the first named places for those who are lying in the hospital, but I inoculate the sides of those who, during syphilization, are going out attending to their business. However, I must add, that I never confine my inoculations exclusively to the sides. If they do not prove effectual there, I apply them on the thighs, on which we shall almost always find the ulcers to be larger, deeper, and of a longer duration. Therefore, I think this place the best, and never fail inoculating there. Every third day I inoculate anew. As long as the last inoculations produce pustules, I take the matter from

these. In some cases I have always tried to take the virus from the first made inoculations, thinking to find there the strongest matter, and thereby, perhaps, be able to achieve the cure in less time; but the cases in which the treatment has been accomplished in this manner are so few, that I should not venture to draw deductions from them. In syphilized children, I have only applied one inoculation on each thigh, and generally also on each side, every third day, or perhaps at longer intervals. The ulcerations produced in this manner may occasionally become phagedænic in grown-up persons. Many wounds may be united into one, and form a large ulcerating surface. This, however, does not signify in the least, provided the treatment be continued without being alarmed. The inoculations are a certain remedy against the phagedænic ulceration. In children, the ulcers are generally so small as not to cause any inconvenience. It is only in cases which have been mercurialized before that I have sometimes seen the artificial ulcerations enlarge, yet never to an alarming degree.

In some instances the inoculated person becomes proof to one sort of virus. I then take the matter for inoculation from another, preferring a case which has had a different origin. This then proves effectual. But sometimes they become proof to this also, and I then seek for a third source; and thus I go on as long as any matter at all will operate.

Moreover, it is worth noticing that immunity does not occur, and the syphilitic phenomena do not vanish, earlier in children than in grown-up persons. The time necessary to produce immunity is about three months. However, it depends upon the number of inoculations that may be employed—upon the symptoms that have taken place; and in children it seems to depend upon their syphilis having been acquired or inherited. The quality of the virus even may not be without influence. When immunity is attained, the syphilitic phenomena generally vanish. However, should this not be the case, it should cause no uneasiness, as they will certainly vanish within a short time, without any remedy being used.

It is not uncommonly the case, that during syphilization a new eruption takes place; but this always exhibits symptoms of the same nature as were observed at the beginning of the process of syphilization. These eruptions need not cause any anxiety. The operator may quietly go on inoculating, and things will proceed as in other cases. One phenomena that I have often seen develop itself under syphilization is iritis. This has been very intense in some cases; but I do not make it the subject of any special treatment, either antiphlogistic or derivative, and the result has hitherto been always favorable.

The syphilitic poison does not run a rapid course, as was known a long time before we heard anything of syphilization. We often see the constitutional symptoms not to show themselves until after some months. Therefore, there is nothing astonishing in the fact,

that the curative results of inoculation do not show themselves until after some time.

But if even by syphilization alone we cannot effect a cure in all cases, it is, nevertheless an indispensable remedy. Patients who have been nearly destroyed by syphilis and mercury may be restored by it to health. The cases belonging to this class may present very different aspects, and the effect of syphilization on them, of course, also different. I therefore think the best way to give my view of the matter is to arrange them in separate groups, viz :

1st. The early constitutional cases recently treated with mercury, in which the same symptoms have reappeared. Here syphilization will, in some cases, produce as certain an effect as in cases not treated before, but we oftener find some irregularity. The phenomena vanish and return again. That which I have said takes place in the individuals not mercurialized is repeated here ; namely, it is always the same forms which existed at the beginning of the syphilization that return.

2nd. The affection may still be confined to the cutaneous system and the pituitous membranes, but the tubercular forms may be predominant, ulcerations on mucous membranes may go deeper, or the affection may be in the subcutaneous areolar tissue. We may even have the *tubercular serpiginous syphilide*.\* These affections are more slowly acted upon. The reason for this may partly be found in the fact, that these forms are often rather of old standing. Mercurial treatment, iodine, etc., have been used against them, and we also often see had forms show themselves within a year after the primary affection. This seems to depend on individual constitution, for it often has no relation to the quantity of mercury, or the care taken of the patient during the treatment.

If, in these cases, new eruptions come out during syphilization, we shall always find them to be more superficial than the earlier affection, if even they have the same form as that which existed at the beginning of the syphilization treatment. It happens in these cases, especially, that the inoculations, after a small number of them have been made, do not produce any effect, then we must give iodine, after which again we shall have larger pustules and ulcers.

3rd. Affections of the osseous system. Here syphilization hardly ever seems to produce any effect. But when iodine has been used earlier, producing results of only a short duration, then syphilization, united with iodine, seems to relieve the nocturnal pains more certainly : but osseous tumors remain unaltered by syphilization.

4th. Affections of the nervous system—hyperæsthesia and incomplete and complete paralysis—may occur : First, in combination with other syphilitic symptoms, and in those cases I have seen them diminish under the influence of syphilization. Secondly, they may be the only phenomena left as the result of the mercurials used against the primary syphilis ; and, under these circumstances, we

\* *Rodasyga*.

see little or no effect from syphilization. However, I must observe, that all the cases of that sort which I have hitherto treated have been of old standing, and have for a long time been treated with iodine, etc.

5th. Mental maladies, finally, may be the result of the mercurial treatment. I have had no opportunity of employing syphilization in such cases, but I consider it well worth trying. The idea that syphilization should be the last refuge, seems to be quite as if quina should not be given in the beginning of an intermittent, but that the system should be first injured by different other medicines, and then quina given afterwards.

As the result of the great many observations made with syphilization, it seems sufficiently proved that the syphilitic virus heals constitutional syphilis, and that it cures the malady without doing any harm whatever to the organism. On the contrary, we see that the uneasiness, the rheumatic pains which often accompany constitutional syphilis, vanish under continued inoculations.

The immediate effect of syphilization upon the organism is generally also very favorable, but there are some who have thought that it may, perhaps, operate perniciously in future time. To this I have only to say, that I can show many individuals discharged from hospital more than three years ago, who have remained in uninterrupted good health, and that in not one of the persons treated in this manner, can I point out any unfortunate result whatever, which could be ascribed to syphilization.

If, finally, I were to comprehend, in a few words, my opinion about syphilization used as a curative remedy, I should say—

1. Syphilization is undoubtedly useful against syphilis; it is the only certain remedy that we know, and it is not pernicious to the organism: mercury, therefore, ought to be banished as a curative remedy.

2. Syphilization is not so certainly useful against *mercurialized syphilis*, but it ought always to be tried. It often does cure it entirely, and it at least does not fail to do some good in the greatest number of cases.

3. The application of syphilization against other maladies than syphilis ought to be tried with the greatest possible care and exact observation.—[*Glasgow Med. Jour.*, from *Dublin Quarterly*.

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*Observations on Dysentery.* By J. L. ABERNETHY, M. D., of Concord, Tennessee.

What is Dysentery? This interrogatory has, doubtless, propounded itself to the mind of every scientific member of our profession, yet the problem has never been explained, so as to be of practical importance to the medical fraternity, or of benefit to suffering humanity. The theories existing are too numerous to relate. Pathologists, however, harmonize more in regard to its nature than its

therapeutics. There is no disease in the whole catalogue of human complaints, that has received as varied a treatment, as the one under consideration. No two authors agree, in every respect; no two practitioners coincide in every particular; and many eminent ones occupy antagonistic positions.

They tell us on the other side of the Atlantic, that dysentery is "purely an inflammation," and the theory, in this indefinite condition, has been endorsed, to some degree, on this side of the "Great Waters." The expression of the above quotation, is very vague and meaningless. Gonorrhœa is "purely inflammation," and, so is gastritis, yet they differ wide in their pathology, etiology and therapeutics. In general terms, dysentery is "purely an inflammation;" but what kind of an inflammation is it?

There are two kinds of inflammation—common and specific. They differ in respect to the causation, and the tissue complicated. The causes of common inflammation are traceable, definite and direct, while the causes of specific inflammation are obscure, indefinite and indirect. The common phlogosis is mostly confined to deep-seated tissues, while the specific variety is generally situated on the skin and mucous membranes. Erysipelatous inflammation is the general nomenclature for inflammatory affections of a specific character, of the skin and mucous membranes.

Is dysentery a specific inflammation? Our answer is in the affirmative. Now for the proof. We will take up and examine the different phases of the disease, and see if the theory advanced can be sustained.

Dysentery is situated, or located, generally in the sigmoid flexure of the colon, or the adjacent intestine, below or above, more frequently below. Why is it that it always attacks this part in preference to any other portion of the alimentary canal, or any other canal with a mucous membrane? Let us make four divisions of the alimentary tube, and briefly examine their anatomical structure separately, and then compare the result. First, the œsophagus, is composed of three coats, layers or membranes. They occupy the following relation to each other: 1st, mucous; 2nd, cellular; 3rd, muscular. The first, or mucous membrane, has a basement membrane which is profusely supplied with bloodvessels and nerves. The second, or cellular coat, connects the muscular with the mucous membrane, and transmits the bloodvessels and nerves, from the muscular to the basement of the mucous membrane, consists of two layers; the fibres of the external are longitudinal, and those of the internal are circular. The stomach is of the same structure, excepting the addition of a fourth or serous coat. The small intestines, like the stomach, possess four membranes. The mucous membrane is longer than either of the other layers, and hence must be thrown into numerous folds, which are called *valvulæ conniventes*. They differ from other folds of mucous membrane in being fixed or permanent. The surface of the mucous membrane, is covered with

a number of papillary projections, called villi, which impart a soft and velvety feeling to it. In the small intestines are found the follicles of Lieberkuhn, glands of Peyer and Brunner, and the solitary glands. Let us now descend to the large intestines, and examine their construction. Here we find a mucous membrane, not unlike that of the small intestines, excepting the absence of the *valvulæ conniventes* and villi; it is whiter, thicker and coarser than the mucous coat of the small intestines. The follicles or crypts are numerous. The cellular layer is the same as found elsewhere in the alimentary canal. The muscular membrane, like that of other portions of the intestines, consists of two fibres, longitudinal and circular. The serous coat is the same as found everywhere, only it has numerous folds of fat, which are called *appendices epiploicæ*.

We have briefly run over the anatomy of the alimentary tube, and find its structure pretty much the same, from the mouth to the anus. We have examined in vain, for a reason why dysentery should be located where it is. There is no rational or explicable reason revealed by anatomy, why it should be situated in the sigmoid flexure of the colon; if there was, then there would be one argument less in favor of the theory advanced.

Pathologists, who call dysentery "purely an inflammation," inform us that there is none of that redness and softening, revealed by pathological investigation, that is so characteristic of gastritis and enteritis; but that there is always more or less ulceration, and in many cases, the diseased bowel is an "irregular, confused and tattered mass of disorganization." Why is it that in enteritis or gastritis there is redness and softening, and in dysentery the bowel is ulcerated, and is often an "irregular, confused and tattered mass of disorganization?" Pathologists explain why this difference in pathological lesions, and another argument is crushed.

The danger to be apprehended in typhoid fever, is peritonitis resulting from perforation of the intestines, and in this fever every organ and tissue of the system is in an unfavorable condition to take an inflammation, because the very elements, or, at least, the concomitants of inflammation, are below the normal standard; yet, in dysentery, when, according to the common hypothesis, the elements of inflammation are in the excess, and the bowel ulcerated, and often an "irregular, confused and tattered mass of disorganization," extensive peritonitis rarely supervenes. Why is this? Because inflammations differ in respect to the tissue diseased, and specific inflammations never attack serous membranes—have no affinity for them.

The most important and pathognomonic sign connected with the symptomatology of dysentery, are the hæmorrhagic discharges. Is hæmorrhage a natural consequence, and concomitant of inflammation of mucous membranes? Most assuredly not. Inflammation of the mouth and œsophagus is not attended with hæmorrhage. Hæmatemesis is no indication of gastritis.

In enteritis, there are no hæmorrhagic evacuations. And all these diseased organs have their cellular membrane profusely supplied with bloodvessels and nerves, afferent and efferent, direct and indirect from the spinal cord. The bleeding, which is sometimes excessive and alarming, that occurs in dysentery, establishes beyond all cavil, the specific character of the disease.

The period of the year in which dysentery prevails, and commits its desolating ravages, indicates much in favor of the theory advocated. All common inflammations are most rife in the cold, dreary and desolating winter, and the ever vascillating vernal months. They are more frequent at these periods, because their causes are more abundant, direct and definite, than at any of the other seasons of the year. The disease under consideration, makes its appearance in the latter part of summer, and generally disappears at the approach of cold weather. These facts are unquestionable evidence, that the cause or causes of dysentery are quite different from the etiology of common inflammations; and inflammations are classified, common or specific, according to their causes. Cold is one among the chief causes of inflammation, but it cannot produce dysentery, for then the disease would be mostly confined to the period when ordinary local phlegmasia exists. Imprudencies of every kind are a prolific source of common inflammations. It is true, the violation of the laws of nature is detrimental to health, and may hasten on, and aggravate the symptoms of any disease, epidemic or endemic; but to suppose that dysentery is dependent upon imprudencies of any description for its existence is the very height of supererrogation. It is no respecter of persons. Its frequency is as great in the affluent mansion, as in poverty's hovel. It is found as often, and its mortality is as great, on the mountain's top, where health-disseminating breezes waft, as along the river shore, or in the low and marshy lands, whose poisonous effluvia pervade the atmosphere.

The etiology of dysentery, like that of those terrible scourges, ægide cholera and yellow fever, is much in obscurity. The chief cause—the predisposing cause—is essentially epidemic. It exists in the atmosphere, manufactured or brought about in some manner, by unnatural changes or conditions of the summer and autumnal seasons. The exciting causes are any and everything, that has a tendency to undermine the normal foundation of the whole system of organs of the human economy.

If dysentery was a common inflammation, venesection to decrease the volume of blood, mercury to diminish the amount of, and check the formation of fibrine, tartar emetic to reduce the action of the heart, and equalize the circulation, and numerous other antiphlogistic agents, would check the disease as quick as they would pleurisy. Will antiphlogistics cure common inflammation? They will. Do they cure dysentery? Would to God they could, but they can't! Experience has taught that we may bleed, mercurialize and antimo-



nialize, and the tormina, tenesmus and hæmorrhage will continue unabated, if not, in many cases, aggravated. In many cases of a very acute nature, in a plethoric patient, the judicious employment of the lancet is of great advantage; but in a large majority of cases the prostration contraindicates it. Experience has taught that bloodletting has no influence over the duration of the disease. Mercury as a sialagogue—not as a defibrinizing agent—is generally beneficial, because the secretion of the liver is invariably checked. Tartar emetic is of no advantage,

Anodynes and cathartics are the remedies most successfully and generally employed. Injections of nitrate of silver through long tubes are thought to be good. The treatment that is generally employed at this time, and the fatality of the disease, point distinctly to a specific disease. But to tell what kind of treatment is best, is not the object of these “observations.” That is reserved for a future paper.

It is admitted, with regret, that the profession knows but little in regard to dysentery. But the science of medicine, like everything in this fast age, is rapidly advancing, and it is confidently anticipated, that before many years will have passed away, some Jenner-like mind will rise up and throw off the mantle of obscurity that is suspended around this disease. \* \* \* \* \*

[*Southern Journ. Med. and Phys. Sciences.*

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*The Pathology of Milk Sickness, in Parke County, Ind. By Dr. JOHN PICKARD.*

Thinking the pathology of milk sickness, as it appears in Parke County, Ind., taken from observations of citizens who have been acquainted with it for thirty years, might be interesting to some of the readers of the Journal, I have prepared the following imperfect article. So little is known by our book making physicians, that they give us no information worthy of note; and so contradictory are the investigations of physicians, who have come in contact with it, that it is impossible to come to any definite conclusions, from the reports we find in the journals. The views given in the April No. of the Journal, relating to the Etiology of the disease under consideration, very nearly correspond with the following experiments, which conclusively show that it is not vegetable, animal, or malarial. A farmer living about a mile from where the disease is known to exist, allowed his cattle to run out, but they never reached the infested district until the dew evaporated from the vegetation; the result was, his cattle nor his family were ever attacked by the disease; were it a vegetable, the absence of the dew would not destroy its poisonous qualities.

Another family having suffered from its ravages, ploughed up

a pasture field, digged around the stumps, thoroughly turning all the soil, and sowed the field in grass, upon which they have kept their stock for twenty years, and at no time has milk sickness made its appearance; while on other portions of the farm uncultivated, it is as fatal as ever. Whether the poison is a mineral or a gas is yet to be tested; but I am inclined to believe it a gas much heavier than the atmosphere, consequently resting upon the vegetation; dry weather seems to favor its production. Last season it was prevalent in many districts, where it had not made its appearance for a number of years, but in no instance did it attack animals kept upon cultivated ground. It may be in the water, but we are not acquainted with any district where this has positively been proven. It, however, seems improbable when the disease prevails upon the neplands, and the springs from which the stock drink flow through the bottom lands, and is used there by other stock, yet the disease never makes its appearance among them.

All species of animals are liable to be attacked by milk sickness, the *graminivera*, first and among those the sheep appears to be the most easily affected; the *carnivera* always obtain it from the flesh of animals that have died with the disease. It is often concentrated in the milk of the cow, and the calf will be attacked when the cow shows no symptoms of disease. Animals well fattened are not liable to be attacked. A farmer in this vicinity, kept his horses on a lot of one acre, and fed them on hay and oats, the disease soon made its appearance among them; he then turned his hogs upon the same lot, fed them all the corn they would eat, and they showed no symptoms of the malady. From the observations and experiments which have been made where the citizens have suffered severely from the loss of property, and the lives of those still dearer to them, we deduce the following conclusions. 1st. Milk sickness is caused by a poison, this poison is generated near the surface of the earth, from some peculiarity in the soil or the soil and atmosphere combined. 2d. That the poison is a mineral or heavy gas, which appears to be produced in the night and destroyed by the rays of the sun. 3d. A thorough cultivation of the soil will destroy it. 4th. That it may be communicated from one animal to another by the flesh or milk. And 5th, that oleaginous substances act as a preventative, and will often cure animals affected with the disease. There is no difficulty in the diagnosis, the patient invariably complains of great weakness, inability to perform labor, a small amount of exercise produces trembling and fainting sensations; as the disease advances, vomiting, and obstinate costiveness are invariable accompaniments, and during the whole time a peculiar odor pervades the room, unlike anything we have ever met with.

The treatment of milk sickness is simple; we have previously stated, that oleaginous substances are preventives, and we have

found no remedy so efficient as Oleum Ricini, by the stomach, if possible, if not, give enemata. Apply sinapisms to the stomach, give cooling mucilaginous drinks, overcome the costiveness as soon as the nature of the case will admit, and you have conquered the main obstacle to successful cure.—[*North-Western Med. and Surgical Journal.*

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*A Case of Puerperal Convulsions, treated with Chloroform.* By WM. DICKEY, M. D., of Centerville, Wayne county, Indiana.

I was summoned on the evening of the 26th of April, 1853, to attend Mrs. B. T——, a robust woman, in labor with her first child. Being informed, on my arrival, that she had had two convulsions, I immediately examined her per vaginam, and found the os uteri pretty well dilated. Her pulse was rather full, but did not indicate any great degree of arterial excitement. As the labor was progressing rapidly, nothing was done to alleviate her sufferings, until after the delivery of the child, which took place in about one hour and a half after my arrival. Up to this time she had had six convulsions. The pulse was not so full, but more frequent—the carotids beat violently, and the convulsions occurred at short intervals. The face was quite livid, and consciousness did not return during the intervals of the convulsions. As I had but little confidence in the efficacy of blood-letting, I told Dr. Isaac Carey, who was in attendance prior to my arrival, that I would try the influence of chloroform. The Doctor yielded to my proposition. Having no chloroform with us, we had to send four miles to procure it. When we had obtained the medicine she had had twenty-three convulsions. They were recurring every few minutes, and she was black in the face and comatose—the pulse more feeble and frequent, and to all appearance the case seemed likely to terminate fatally. The chloroform was administered for three quarters of an hour, the amount inhaled being governed by its influence on the circulation. She did not have a single convulsion after the administration of the chloroform, although the coma lasted for two days. I do not know the subsequent treatment, as she was in the hands of Dr. Carey.

I regard puerperal convulsions as the result of depressed innervation, and engorgement of the venous and capillary systems; either of these may be first affected, but in the end both become involved. Medical writers have taught that puerperal convulsions are associated with a tremendous rush of blood to the brain, and a state of compression of that organ; so that blood-letting has been considered as almost the only agent capable of arresting such a formidable disease. And it is not to be wondered at when the physician is called to witness an attack of the disease; the quickly repeated spasms; the flushed face become even livid and black;

the violent beating of the carotids, and the distended jugulars, with a full and frequent pulse—that he is almost certain to conclude that blood-letting is the sheet anchor. And now, as he has been previously taught, he bleeds his patient without regard to quantity; he bleeds her at short intervals until the convulsions cease, or his patient dies. A true representative of this practice is Dr. Dewees. See case second and third, in his work on the practice of Midwifery, pages 464—65. In the second case “the patient lost one hundred and twenty ounces of blood in the space of six or seven hours, and about one hundred and forty altogether.” From case third, was taken during the first five hours, one hundred and twenty nine ounces. “The convulsions now ceased for twelve hours. At the end of that time the Doctor was called in suddenly, on account of her breathing becoming more laborious and loud; the face more flushed, with some convulsive agitations; the Doctor thought best to abstract ten ounces more by cups, and the woman lived.” And truly this is astonishing, especially if she lost much blood by flooding after the delivery of the child.

No doubt blood-letting may sometimes prove a valuable remedy. It is, however, believed to be, either in venous engorgement of the capillaries, or depressed nervous function, nothing more than a preparative measure to more efficient remedies. The cases in which it may be employed, are, where there is strong action of the heart, great throbbing of the carotids, and general plethora.

There can be no question that at the full term of utero gestation, and especially when the uterus has commenced its vigorous contractions, that it acts by sending a sudden shock to the nerve-centers, and the impulse transmitted to the circulatory system, gives a determining course of the blood to the brain. In this condition it is very probable blood-letting is essential, more, however, as a palliative than curative means.

If we are correct in our conclusions, it is obvious that the abstraction of blood can do but little to remedy a toxic condition of the blood, and still less, will it be adequate to remove a lesion of innervation.

The object of the writer in penning these thoughts was not to write a systematic treatise on the disease, and discuss the efficacy or inefficiency of the different articles of medicine used, or means employed in the management of the affection but to condemn the pernicious practice of copious depletion, and to draw the attention of the profession to the employment of chloroform in the management of this disease.

The condition in the disease being a loss of innervation, whereby the capillaries lose their tone, the circulation becomes interrupted, and venous engorgement follows. If we are correct in our notions of the *modus operandi* of chloroform, it fulfils the indications. The first impression is probably gently stimulating, thus

equalizing the nervous energy. And as the congested capillaries are under the direct control of the nerve centers, it is very likely the new stimulus gives tonicity to the capillary vessels, and a better circulation. And as we continue the remedy, and obtain a stronger anæsthetic influence, insensibility follows, and the spasms cease. A sufficient number of cases have been reported, that terminated favorably under the use of this remedy to entitle the profession, to some confidence in its virtues.—[*Western Lancet.*]

*On some of the Effects produced by Carious Teeth.*

To the Editor of the Lancet:

Sir,—The perusal in the Lancet of the interesting practical lecture by Mr. Smith, of Leeds, on the above subject, recalled to my mind three cases somewhat analogous to those related in Mr. Smith's lecture, which have come under my own notice during the last two years. Their true nature and obvious treatment did not occur to myself, and a statement of them may be useful to some of your readers. The three patients were all young men, between the age of twenty-five and thirty years, and, curiously enough, they were all affected on the *left* side of the face.

1. R. S—, by occupation a coachman, footman, etc., to an old gentleman, called upon me two years ago to get something done for a sore on the centre of his left cheek. He said it had been a boil, which suppurated and broke about two months previously. His face was much swollen, and as he had to wait at his master's table, it rendered him unfit for his work. The patient had consulted another surgeon, and had tried various remedies, but could not get it healed. He was otherwise the picture of health. I thought it might be some chronic affection of the parotid gland, strumous or otherwise. I gave him some zinc lotion to inject into the opening, and to apply a bit of rag dipped in the same, and covered with oiled silk. In about three weeks he came to tell me that the sore was healed, but his cheek was swollen. I gave him iodine to apply over it. There was an ugly cicatrix where the sore had been. In the course of another month the patient came again, presenting an abscess ready to burst in the old place. I opened it, told him to poultice it for a few days, and then use the former treatment. In about three months he called again, and told me that after he last saw me, being useless in his situation, he went home to Edinburgh, where he saw Professor Syme, who gave him something to use, and that the sore did not heal for six weeks after I opened it. The Professor told him that the sore arose from a wisdom tooth coming up, for which there was not room in the jaw, and advised him, if the sore did not heal, or should trouble him again, to have the adjacent tooth extracted. His face was now much swollen, and an abscess was evidently forming again. I examined his mouth, and saw that he had got

the upper wisdom teeth only, and there was evidently a want of space for those below. I accordingly extracted the second molar tooth, after which the swelling gradually subsided, and the wisdom tooth soon filled up the vacant space. He was now permanently cured.

2. Some months before I saw the last case, R. T——, a forester by occupation, came to me with a large abscess on the left cheek, about an inch above the angle of the jaw. I opened the abscess, and by using poultices for some days, and water dressing afterwards, the sore healed in about two weeks. Shortly after I extracted the tooth from case No. 1, I was again visited by No. 2. The abscess was now the same as before; but observing the similarity between the appearance of this case and the former, I examined his mouth, and saw that he still wanted the wisdom tooth in the left lower jaw, for which there was evidently no room, and the gum round about was a good deal inflamed. It so happened that a year or so before he came to me with the first abscess, I had extracted the second molar tooth in the right lower jaw for toothache, the place of which was now filled up by the wisdom tooth. I now extracted the same tooth on the left side, when the abscess broke into the mouth, and the wisdom tooth replaced the removed one as before. He has not been troubled since.

3. A. T——, a dealer in tea, consulted me four months ago for a swelling on his cheek. I found that an abscess was forming. The treatment and results were the same as in the other cases, with the important exception that, having recognized the nature of the case before the abscess broke on the cheek, I saved this patient from having an ugly cicatrix, as the other two unfortunately had, and will have as long as they live.

I am, sir, your obedient servant,

*Peebles, 1857.*

ROBERT CRAWFORD, M. D.

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*On the combined Local and Constitutional Treatment of Hooping-Cough.* By RAVENHILL PIERCE, M.D.

As I consider it the duty of every medical practitioner to bear testimony to any successful method of treating any peculiar disease which may have fallen particularly under his notice, I beg to press upon the profession the plan I have adopted in that troublesome and painful-to-witness disease—Hooping-cough. In *seventy-five* cases, (thirty-two boys and forty-three girls,) varying in age from two to eight years, which came under my care during last autumn, in a school containing over a thousand children, I used the local treatment recommended by Dr. Eben Watson,—viz., syringing the glottis once a day with a strong solution of nitrate of silver, (one scruple to one ounce of distilled water,) by means of a curved probang; and in combination with this I ordered Dr.

Gibb's nitric-acid mixture (dilute nitric acid, twelve drachms; comp. tincture of cardamoms, three drachms; water, one ounce; simple syrup, three ounces and a half), a teaspoonful every three hours. I also from the commencement gave a teaspoonful of cod-liver oil twice a day, and at the same time kept the patients on generous diet and in warm yet well-ventilated rooms.

Now, this treatment has in my hands been invariably successful, and the little sufferers have not only escaped all those troublesome and dangerous complications which so frequently attend and follow whooping-cough, but have at the termination of their illness, in numerous cases, gained both flesh and stamina. I am perfectly aware that both the nitrate-of-silver and nitric-acid plans have been used separately, but I have not heard of the two methods being combined.

I am desirous of calling particular notice to the fact of my having given cod-liver oil from the *very commencement* of the attack, instead of waiting till the period of convalescence; and to this as well as to the generous diet, I, in a great measure, attribute the satisfactory and non-debilitated state of the patients at the time of their recovery.

I would also mention that after a few applications of the solution of nitrate of silver I have found that the force of the peculiar spasmodic cough has been diminished in frequency and intensity, and the shock to the system caused by the straining and convulsive efforts of the patient consequently much lessened. If any of the numerous readers of *The Lancet* have already pursued a similar plan of treatment, I should be very glad to learn the result.

[*London Lancet*,

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*Camphor and Epilepsy.* By JOSEPH O. BROOKHOUSE, M. R. C. S.

The following case occurred to me in the practice of Guy's Lying-in Charity:—

E. P——, aged thirty-two, a multipara, and apparently healthy woman, after a natural labour, was ordered the usual after-pain mixture, consisting of spirit of camphor and tincture of hyoscyamus, of each twenty minims, in mucilage, repeated every three or four hours, as might be necessary. About five minutes after taking the first dose she was seized with vertigo, impairment of vision, and almost immediately became insensible. She foamed at the mouth, and there were general twitchings of the muscles, more especially those of expression. No urine or fæces were expelled during the fit, which lasted nearly six minutes. On recovering consciousness, she was quite ignorant of what had transpired, did not complain of inconvenience, and convalesced without any unpleasant symptoms. The above circumstances brought to her mind the fact of her having been affected in a somewhat similar manner eleven or twelve years ago, after eating a piece of cam-

phor about the size of a nut, the only difference between the two attacks being the duration of time with reference to the development of symptoms as well as period of recovery—a difference which may probably be explained by considering the form in which the drug was taken.—[*Ibid.*

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*On a Simple Mode of Reducing a Dislocated Elbow.* By M. BIDARD, of Arras.

In a recent communication to the Société de Chirurgie de Paris, M. Bidard relates a case in which a dislocated elbow was reduced in a very simple manner, after the ordinary means had failed. A child, aged 13, had dislocated his elbow, and the dislocation had been reduced in the ordinary way. A month later the elbow was again dislocated. On this occasion the child said nothing about the accident, and five weeks passed before the mischief was discovered, and the attempts at reduction repeated. These attempts failed. It then occurred to Mr. Bidard to persuade the child to swing himself by both hands from a cross beam of wood, and to allow his hands to be held in this position by another person when he became tired. These swingings were continued for fifteen or twenty minutes at a time, and repeated every morning and evening; and the result was that the displacement had entirely disappeared on the seventh day. It appears from the account, that the displacement diminished progressing between the first and ninth suspension; and that the rest of the deformity disappeared suddenly during the fourteenth suspension.

This method, as Mr. Larrey observed afterwards, possesses some analogy to that of the *door*, as formerly practiced by some surgeons, but with this difference, that the reduction is effected gradually in this case and suddenly in that.

As to the rest we are disposed to think there need have been no difficulty if the chloroform had been employed; for, unquestionably, dislocations of much older standing are easily reducible with the help of this agent.—[*Gaz. Hebdom. de Méd. et Chir.—Buffalo Med. Journal.*

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*Idiopathic Dysentery treated by Bismuth and Astringents.*

We all know the value of bismuth in the dysentery and diarrhoea of phthisis—in fact, its importance cannot be over-estimated in that particular affection. We have had the opportunity of watching a case of idiopathic dysentery, which is at present in the Royal Free Hospital, under Dr. Brinton's care, of a young man who was admitted, on the 4th of February, with as many as twenty dysenteric motions per diem. Its origin was due to cold,



while working in a gas factory by night; there was no evidence of the existence of putrefying matter in the neighborhood. Under the influence of a mixture consisting of a scruple of bismuth, ten grains of compound powder of kino, two drachms of mucilage, and an ounce of infusion of krameria, every six hours, conjoined afterwards with enemata every night, of twenty minims of tincture of opium, two drachms of tincture of catechu, and two ounces of decoction of starch, the stools gradually diminished to only one daily for the last fortnight; the last three days he has had none. At the same time, the most careful attention has been paid to his diet, which consists at this moment (March 16th) of fish. He has been a voracious eater, and is now only kept in hospital for the purpose of regulating his diet. The treatment pursued here proved highly satisfactory, and is well worthy an extended trial in dysenteric complaints. We will not say the good effects were solely due to the bismuth. Of late years, it has been specially recommended, not only in the diarrhoea of phthisis, but also that of enteric or typhoid fever, and the chronic diarrhoea of children.

[*London Lancet.*

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*Nitrate of Potash in Large Doses in Ascites with Anasarca.*

We read in the Rev. de Ther. Med. Chir. (Jan. 15th, 1857,) an interesting account, translated from the *Chronica de las Hospitales*, of the case of a man who, in eighteen days, was entirely relieved of ascites and anasarca by the use of large doses of the above remedy. On the first day of treatment, which was, as near as we can ascertain, about six weeks from the coming on of the dropsy, and upwards of seven weeks from the beginning of an attack of remittent fever which preceded the dropsy, the new medical attendant, M. Angulo, directed for his patient two drachms of nitrate of potash dissolved in a saccharo-mucilaginous vehicle, which was to be taken in a period of thirty hours. On the first day of treatment there was a slight increase of the urinary secretion; the stomach bore the medicine very well. On the following day the nitre was increased to a little more than three drachms. The patient had some alvine evacuations; the urine was more abundant than on the preceeding day. On the third day the patient was much better. At his request the same medicine was given, the doses of which were successively raised until, on the eleventh day of treatment, they had reached eleven drachms and two scruples, or nearly an ounce and a half in twenty-four hours. On the twelfth day the body had resumed its customary size, after an excessive urinary discharge, which had supervened on the fifth, sixth and seventh days.

In proportion as the serous effusion was absorbed, the appetite and strength were resorted, and dating from the seventh day's administration of the nitrate of potash, the patient was able to walk

about his room. At the time he came under the charge of M. Angulo, this man was unable to leave his bed, and so great was the anasarca and swelling of the eyelids that the globe of the eye was no longer visible.

The regimen consisted of preserved fruits, baked apples, panada, vermicelli soup, a little good wine, and at a later period a more abundant alimentation. After the twelfth day the dose of the nitrate of potash was diminished, and on the nineteenth it was abandoned. On the 8th of January, 1856, or seven weeks and two days from the beginning of the nitre treatment, the man was so entirely restored to health, that he resumed his business on the road in trading in wine, which he transported by mules.—*Memphis Med. Recorder.*

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#### THERAPEUTIC APPLICATIONS OF CHLORATE OF POTASH.

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*Chlorate of Potash in Mercurial Stomatitis.* By THOMAS J. GALLAHER, M.D., one of the Physicians to the Western Pennsylvania Hospital, Pittsburg.

Mercurial stomatitis is a most loathsome and obstinate complaint. Slight attacks of this affection are comparatively of but little consequence, for, with proper precautions as to exposure, they will mostly disappear in a short time without remedial measures being resorted to. More grave forms, however, in which the gums become very sore, the tongue swollen, the mucous membrane of the mouth ulcerated, the salivary and other glands in the vicinity of the neck enlarged and tender, the breath fetid, the jaws stiffened, deglutition difficult, salivary secretion increased, etc., are of more serious import, and demand the attention of the physician. If a case of this kind be left to itself, or if merely palliatives be employed, it will generally last some weeks, and it may be months before its complete removal by nature is effected.

Many remedies have been suggested and various plans of treatment tried for the removal of this artificial malady; but none, until the chlorate of potash was proposed, met the wants of the profession, and none gave general satisfaction. Recent authors have generally contented themselves with recommending exposure to a warm dry air, cathartic medicines, topical depletion, and the local application of numerous washes—demulcent, astringent, and stimulating—to the inflamed parts. How uncertain and unsatisfactory these means have been, the profession everywhere can answer. For my part, I may say that I have often been so dissatisfied with the slowness with which mercurial sore throat disappeared under this treatment, that I thought that no good was derived from it further than temporary amelioration of disagreeable symptoms and preservation from external injurious influences.

This treatment is eminently palliative—not specific. Present relief is afforded—while the affection is allowed, in a great measure, to run its own course.

Recently, a new remedy has been proposed which, from a pretty extensive employment of it, I now regard as much a specific for mercurial stomatitis as quinia is for intermittent fever.

Ihr was the first to recommend the use of the chlorate of potash in ulceration of the mouth following salivation, but to Messrs. Herpin and Blache, of Geneva, are we indebted for a more full and satisfactory account of the beneficial effects of this salt in mercurial stomatitis in all its forms and stages. The first account of the discovery of these eminent physicians which appeared in this country, was published, I believe, in the April No. of the *American Journal* for 1855. Since that time I have had frequent opportunities for employing it, and uniformly with success. I have seen ordinary mercurial stomatitis disappear under its use in a few days, while the most loathsome forms have been observed to yield in ten. Judging from past experience, I now, with the use of this salt, can remove a mercurial disease of the mouth in from six to ten days, which, under any other proposed plan of treatment, would last from four to six weeks. I may say that I have found it equally beneficial in all stages and degrees of salivation, as well as in ulceration of the mucous membrane of the mouth, which sometimes remains after the other symptoms have disappeared.

My method of treating a patient affected with this disease is as follows: He is placed in a warm and comfortable apartment, and made to live on gruel. I then order him ten grains of the chlorate of potash, dissolved in a tablespoonful of cold water, three or four times a day, according to the severity of the affection. Should there be ulceration of any portion of the mucous membrane of the mouth, I direct a weak solution of the salt to be applied to the denuded part several times a day. Generally, nothing else is required—the cure being accomplished in a few days. To illustrate more fully the effect of this remedy, I have appended a few cases, which have been selected from quite a number that have fallen under my notice.

CASE I. The first case in which I had an opportunity of employing this remedy, was in May, 1855, on the person of a young lady, aged 26 years. Blue mass pills had been given her pretty liberally, by the family, for some imagined illness, until her gums and mouth became so sore that it was with difficulty she could swallow food. After suffering some days under these symptoms, I was called to visit her. I found her breath fetid, gums sore, mucous membrane of the mouth partially ulcerated, and other unmistakable evidences of confirmed salivation. For a few days, I gave the usual mouth washes, a gentle cathartic, and required her to remain confined to her room. For about one week she used the means I suggested, with but little advantage. At this time I was made acquainted with the good effects

of chlorate of potash in mercurial stomatitis, and at once determined to put it to the test. I accordingly prescribed it as follows: R.—Potass. chlorat. ʒij; aquæ ʒvj.—M. One tablespoonful of this solution to be taken three times a day. I saw the patient two days afterwards, and found her much better. Her mouth had commenced to heal, the mercurial fetor of the breath had diminished, and she felt able to swallow food. In a week from this time the disease was entirely removed.

The speedy relief obtained in this case gave me some confidence in the new remedy, and satisfied me that it was worthy of further trial. An opportunity soon occurred.

CASE II. Miss C—, aged 23 years, while employed in the capacity of a dry nurse, was attacked in the spring of 1856, with severe neuralgia of the right side of the head and upper part of the face. The physician to the family in which she for the present resided, was called to see her, who pronounced it disease of the brain. Powders containing calomel were ordered. She took the medicine a few days, but her mouth becoming very sore, and her sufferings not being alleviated but rather increased, her friends determined to take her home and send for their family physician. I found the patient labouring under remittent hemicrania of most excruciating severity, accompanied with mercurial salivation. The severity of the symptoms required active medication, I ordered at once remedies both for the neuralgia and sore mouth. A liniment composed of chloroform and olive oil, was ordered to be applied to the head and temples, and ten grains of the sulph. of quinia to be given night and morning, for the former, while ten grains of the chlorate of potash, three times a day, was prescribed for the latter affection. In three days the hemicranial pain had subsided, when the quinia was suspended. The sore mouth had, in the mean time, improved. Four days' more employment of the chlorate stopped the salivary discharge, and healed up the mouth. The cure was prompt and decisive.

CASE III. In January, 1857, I was called to visit a Mrs. M—, who complained of a bad breath, sore mouth, loss of appetite, &c. I learnt that, about one week previous to my visit, she had taken some anti-bilious pills, which were supposed to contain mercury. An examination of the mouth told at once the cause of her sufferings. She was severely salivated. Nothing had been done, further than a Dover's powder had been taken at bedtime, to work the cold off, as she expressed it, and an alum wash for the mouth had been used freely. It may not be improper to state that no advantage was derived from these. The patient was directed to remain in her room, live on spoon diet, and take the chlorate in ten grain doses, three times a day. On my visit the following day, she was much better, and declared the first dose helped her. A continuance in the remedy effected a perfect cure in a few days.

CASE IV. This was a case of ulceration of the mouth following salivation. It was of nearly three weeks' continuance, and many local applications, including nitrate of silver, had been ineffectually made to it. I gave the chlorate in the usual form and frequency, and ordered the ulcer—which was situated beneath the tongue, of large size and very painful—to be washed several times a day with a weak solution of the same, and had the satisfaction of seeing it heal up in five days.—[*Am. Jour. Med. Sciences.*

*Chlorate of Potash Injections in Leucorrhœa and Ulceration of the Os Uteri.* By BEDFORD BROWN, M. D., Caswell County, N. C.

Knowing the peculiar and happy curative influence exerted by chlorate of potash in external ulcerations attended with vitiated discharges, and having been so often disappointed by the usual modes of treating such cases, the great difficulty of which all medical men acknowledge, I determined to experiment with injections of a solution of that salt in ulceration of the os uteri and cervical canal attended with leucorrhœa.

The discovery of some simple and efficient means as a substitute for the uncertain astringent injections in common use, and the tedious and often unsuccessful caustic and speculum, would relieve the physician of an extremely disagreeable duty, and the patient of an almost intolerable necessity.

In those cases of leucorrhœa attended with ulceration of the os uteri or cervical canal, and enlargement of the muciparous glands of the vagina, or simple ulceration without leucorrhœa, I believe the injections of the chlorate far more certain and efficient than the ordinary astringent injections, or the local application of caustic. In these cases I have not thought proper to give detailed reports of their symptoms and progress.

CASE I. A colored woman, aged 30, who had never borne children, and had, from early life, complained of symptoms of uterine disease. At the time she came under my charge, she had profuse leucorrhœa. On examination with the speculum, the entire vaginal canal was seen highly inflamed—the os uteri very tumid, with numerous large ulcers. This woman used, by injection, a solution of the chlorate, in the proportion of 3j of the salt, dissolved in ℥viij of rain water. As much of this as an ordinary female syringe contains was used twice daily. Under the influence the ulceration and inflammation, with the attendant leucorrhœa, diminished rapidly, and in two weeks all indications of disease had disappeared. In this case, the locality of the disease was confined to the vagina and the os uteri.

CASE II. To digress from the subject, I would report the present case as illustrating the equal powers of the chlorate of potash in gonorrhœa of the female. This patient an unmarried female had suffered from gonorrhœal disease, until the vaginal inflammation had become excessive with very copious, purulent, and exhausting discharges, accompanied by so much tenderness and pain as entirely to preclude the use of the speculum. The difficulty and pain of urination were such as to compel me to use the catheter frequently. The same treatment as in the previous case was adopted, and with equal success. In fact, this patient (servant) who had been perfectly disabled, in ten days after using the chlorate injections, was attending to her ordinary duties.

I strongly conjecture that gonorrhœa of the male would be equally amenable to the same treatment; and, as soon as the first opportunity presents, I design testing it. If so, a new era will be introduced in the management of that intractable disease.

CASE III. This was an example of leucorrhœa originating from ulceration of the os uteri and inflammation of the cervical canal. The woman was married, and had been confined prematurely three months previous. She used the chlorate of potash injections, and remained in the recumbent position for some hours after each injection. She found equal benefit from the remedy, and is now attending to her customary duties, without any of her former symptoms.

CASE IV. and V. In these cases there was ulceration of the os uteri and cervix, with very slight leucorrhœa, though suffering from the ordinary annoying symptoms of uterine affection. In both cases, the chlorate in solution healed the ulcerations in between two and three weeks, with signal relief to the patient.

To sum up briefly, those conditions to which the chlorate of potash injections are applicable, I would say those cases are appropriate, wherein ulceration and inflammation are confined to the os uteri and cervical canal and vagina, either with or without leucorrhœa.—[*Ib.*

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## EDITORIAL AND MISCELLANEOUS.

DR. MARSHALL HALL'S REPLY TO OUR LETTER.—Through the kind attention of Messrs. T. K. & P. G. Collins, of Philadelphia, and of Professor A. Stillé, who courteously placed at their disposal his May number for our use, we are enabled, at last, to lay before our readers, all which has appeared in the London edition of the *Lancet*, in relation to our claim.

It will be recollected, that Dr. Marshall Hall's article, making the announcement of an excito-secretory system of nerves, first met our eye early last March, our letter was forwarded to him, we think, about the 20th of that month; his reply, it will be seen, is dated "April," and the essential parts of our letter are found in the pages of the May number. We certainly have no reason to complain of any want of promptness, either on the part of Dr. Marshall Hall, or the London *Lancet*. It will be seen that the Editor excuses himself, for not complying fully with Dr. Hall's request, "to let our paper appear in the *Lancet*," on the ground, that our letter is too long, and contains "needless repetitions." The paper is certainly lengthy and contains repetitions, but it must be conceded, that under the circumstances, they cannot be considered needless. It was necessary to present to Dr. Marshall Hall in *England*, the various proofs we had, that we were the first propounder of an important doctrine in physiology; these proofs were scattered through a number of *American* publications, which, from his announcement of the doctrine *as his own*, we had the best reason to believe were not accessible to him—a mere reference to the works would not have been sufficient, the articles, themselves, had to be presented seri-

stim with the dates and circumstances of their original bringing forth. As our protest, against the claim of M. Claude Bernard, was but a reiteration of what had been presented in the original paper, of course, when we presented this in regular order to Dr. Hall, after the paper on Dentition, it constituted a repetition, but certainly not a needless one. We think this repetition only served to pile proof upon proof, and as, in a legal instrument, the advocate never sacrifices definiteness and clearness to elegance, we, having but one object in view, viz., producing conviction in the mind of Dr. Hall and other readers, that *our* announcements were prior to his, used repetition, and even tautology, whenever we thought it would add force to our argument. This result has been obtained, our claim has been fully yielded, and we do not complain if the Editor of the *Lancet* does differ with us as to the mere rhetoric used in the presentation of our proofs. We thank him for the large space he has given to our paper, and the entire fairness with which he has presented our arguments. We certainly would have preferred that the courtesy and spirit of kindness, which we endeavored to breathe through our letter to Dr. Hall, had been allowed to meet the eye of his European readers, but his valuable weekly journal, we presume, could not afford so much space.

Dr. Hall's admission of our claim is, as he properly terms it, an "adjudication," for, in yielding to us the merit of priority in the announcement and naming, he could not ignore the claims of M. Claude Bernard, as one who had subsequently *proved* our doctrine by *experimental demonstration*.

As the relative value of observation and experiment has been fully discussed and illustrated, in our subsequent paper to the American Med. Association, (Prize Essay,) we make no further reference to his award to M. Bernard, in this place. The substance of our claim, viz., that the theory of an excito-secretory action was a deduction of *our own*, has been promptly, courteously, and fully yielded by Dr. Marshall Hall, and henceforth we are satisfied with his acknowledgement. The generalization of the doctrine, and the extended application of the principle throughout the organism, we cheerfully yield to Dr. Marshall Hall; although in our assertion of the excito-secretory action in 1850 and '53, we by no means restricted it to pathology and dentition, but said, "*that there existed between the cerebro-spinal and the ganglionic system of nerves, a relation similar to that between the sensitive and motor branches of the cerebro-spinal, &c.*"

Occupying the exalted position in the field of REFLEX ACTION, Dr. Marshall Hall does, he can well afford to yield any just claim to those who have come after him, to work out the *detail* of his grand induction. When he decides between M. Claude Bernard and his humble American correspondent, when he smiles approvingly upon the labors of Dr. Tyler Smith, and many other physiologists and pathologists, in their application of the reflex doctrine to physiology and pathology, he is really but the Parent-arbiter,

dispensing even justice among his own children, and encouraging them to cultivate and enrich a domain which he, himself, has deeded to them and to the world. Happy has he been to live to see such noble results from an induction entirely his own!—Long may he yet live to open new fields, and incite others to higher attainments; each one of which will only add a new chaplet to his own resplendent brow.

#### THE EXCITO-SECRETORY SYSTEM;

*Claims of HENRY FRASER CAMPBELL, M.D., of Augusta, Georgia, U. S.*

By MARSHALL HALL, M.D., F.R.S., of the Institute of France, etc., etc.

To the Editor of the *Lancet*:

Sir,—I have received a printed letter, addressed to me by Dr. Campbell, of Augusta, Georgia, U. S., stating his claims to priority in the detection of the excito-secretory sub-system of the spinal system, and requesting me to use my influence to obtain its insertion in *The Lancet*. May I therefore beg that it may, if possible, appear in that publication?\*

"*A Claim of Priority in the Discovery of, and also the naming of Excito-Secretory System of Nerves.* By HENRY FRASER CAMPBELL, M.D., of Augusta, Ga., U.S.A., Member of the American Medical Association, Professor of Comparative Anatomy, &c., in the Medical College of Georgia, and Senior Editor of the Southern Medical and Surgical Journal.

#### "EXCITO-SECRETORY SYSTEM OF NERVES.

"LETTER TO DR. MARSHALL HALL, OF LONDON.

"AUGUSTA, GA., U.S.A., March 2, 1857.

"*My dear Sir,*—In the number of the London *Lancet*, republished in this country, for March, 1857, I have just read a paper from your distinguished pen; and in this paper you announce a system of Excito-Secretory nerves, in the following connexion and in the following terms:—

"In a memoir read at the Royal Society in February, 1837, I announced the existence of an excito-motory system of nerves.

"I believe I may now announce a system or sub-system of excito-secretory nerves, not less extensive."

"As the above announcement is here made in close relation with a discovery long admitted to be your own—viz., that of the excito-motory system of nerves, and inasmuch as in your subsequent remarks you attribute the proposition to no one else, I am left to infer that it is deemed by you an original deduction from the admitted facts of anatomical and physiological science, as developed by observations and experiments during the last and the present century. Some of these last—viz., the experiments of M. Claude Bernard, of Paris—you adduce, with the apparent intention of fortifying the views you here express.

"Finding in none of your communications upon this interesting topic, any mention made of my name or of my records, I am, with regret, im-

\* Dr. Campbell's letter consists of sixteen dense octavo pages, is very diffuse, and contains needless repetitions, as the whole of p. 7—9, and p. 11—13. We have therefore inserted it in a form suited to our space. We have omitted no important paragraph.—[Ed. L.]



pelled, from considerations of courtesy to you, and of justice to myself, to call your attention to the registration of my own labours in the same important field. I will, however, direct you particularly, though briefly, to several portions of your own communication, in order that they may be placed in convenient juxtaposition with my own records, without giving the trouble of each time referring to the pages of *The Lancet*:

“But the most remarkable proof of the doctrine which I am endeavoring to unfold is furnished by the brilliant discovery and skilful experiments of M. Cl. Bernard”—

“And you here refer to his well-known experiments on the pneumogastric nerve in its relation to the secretions of the liver, published in his Lectures on Experimental Physiology during the winter session of 1854 and 1855.\*

“In the earlier part of your communication [March, 1857,] you thus announce the addition of this, as you suppose, *new* sub-system, to what you term the ‘Diastaltic Nervous System,’ the term ‘henceforth’ apparently being used to date the initial moment of an era:

“Henceforth the diastaltic nervous system must be divided into two sub-systems.

#### I. The Excito-motory.

#### II. The Excito-secretory.

“The former is extended to the entire muscular system; the latter is diffused over the general system as the blood is diffused over the system.”

“Again, in reference to the *pathological* relations of the *excito-secretory* system, you remark,—

“The *pathology* of the excito-secretory sub-system remains to be investigated and traced. A partial keen current of air falling on *any* portion of the skin may induce inflammation in *any* susceptible internal organ. An extensive burn or scald is apt to produce pneumonia.”

“And as my last quotation for the present:

“But here I close this brief communication. My present object is only to draw the merest sketch of this *vast* subject, which demands a most extensive and cautious series of experiments and observations. The efforts of many labourers, through many years, will be required fully to develop the *two* sub-systems of the diastaltic nervous system.

“I propose shortly to treat this important subject at greater length, and with more details.”

“Now, my dear Sir, by a reference to the following series of records, running through a period of nearly seven years, you will at once perceive that the excito-secretory function of the nervous system has been the subject of earnest and diligent inquiry, and also of *plain record*, with me, for a length of time far anterior to that at which either yourself or M. Bernard had published anything on the subject.

“You will herein also perceive that this system of nerves has been plainly recognised and set forth, as considered in its relations to *pathology*, through which, indeed, its *physiology* has been mainly deduced by me. And lastly, that this system of nerves, before plainly stated and amply discussed, was, as early as May 5th, 1853, in the presence of the American Medical Association, the highest tribunal in the medical sciences within my reach, *publicly* named by me, the Excito-Secretory, and that too, in

\* *Leçons de Physiologie*, p. 325. Paris, 1855.

juxtaposition with, and contradistinction to, your own discovery—viz., the Excito-Motory function.” (pp. 1—3.)

“June, 1850.—Permit me now, respected Sir, to refer you to the pages of the *Southern Medical and Surgical Journal* (new series), vol. vi. No. 8, June, 1850. Part I.—Original Communications. Article XV., page 321. You will in this place find the paper just cited, published—viz., ‘An Essay on the Influence of Dentition in producing Disease. By Henry F. Campbell, M.D., Demonstrator of Anatomy in the Medical College of Georgia.’ Here you will find that I have in the beginning sketched prominently the two orders of phenomena which occur during the period of dentition,—viz., the *convulsive* and the *secretory*, explaining the first easily enough by a reference to the principles of excito-motory action laid down by yourself; whilst the other set of phenomena I presented in such a manner as that, from them, the excito-secretory function of the nervous system became an *obvious* and an *unavoidable deduction*: by this means mutually establishing a physiological principle before scarcely ever broached or hinted at; and, in the second place, leaving no chance to escape the necessary admission that this set of phenomena, before perfectly inexplicable to the profession, could only be rationally interpreted by the admission of that very physiological principle. In doing this, the ‘two sub-systems,’ as you now term them, were, throughout, kept in *close relation*, but in *decided contrast*, the one being used occasionally, it is true, to illustrate the other, but never for a moment becoming *confounded* with the other: thus—‘Now let us inquire how far these phenomena are dependent upon dentition; and ANALOGY with the EXCITO-MOTORY system will much assist us in our argument. We have seen that local irritation can, through this system, produce convulsions by the reflex function of the nerves, the sensitive branches of the fifth pair becoming excitor to the *motory-spinal* nerves; and so, may we justly infer, do these same branches, under certain circumstances, become excitor to the SECRETORY filaments of the *sympathetic*, distributed so abundantly to the intestinal canal, by a transmission of this irritation through the various ganglia with which it is connected.’”

“Without further remark at present, I will lay before you that portion of this Essay which embodies my first record upon the excito-secretory function of the nervous system:—

“From the above considerations we are induced to conclude that the *convulsions* are often produced by the irritation of dentition, and can be directly referred to this as the sole cause.

“We arrive now at a point in this somewhat obscure and much disputed question which, perhaps, affords more ground for doubt than any of the foregoing,—viz., a consideration of the *pathogenic influence of dentition in the cholera infantum, or diarrhœa*, so uniformly co-existent with this process. Unlike the convulsions, the analogy between which and certain known and established phenomena of the excito-motory system, which it is only necessary to refer to, and their operation is plain and intelligible, this new set of symptoms, if we refer them to the process of dentition, requires us to look yet deeper into the mysteries of our nervous organization, and to *venture still one step further on the terra incerta* of sympathetic interpretation.

“In order to apply our arguments, let us hastily review the foregoing investigation, that they may bear more fully upon this part of our question; and, firstly, we have seen that inflammation, pain, and irritation are pro-

duced *locally* by the process of dentition, evinced by restlessness, biting, etc. Secondly, we have seen that this local irritation can be transmitted by excito-motory influence to other and distant parts of the body, manifested by convulsions. We have also endeavoured to corroborate this latter opinion by a reference to the order of succession in the nerves in which this irritation occurs, and also by a comparison of these phenomena with other well-understood and established analogous phenomena. Heretofore we have had to deal entirely with functions of the cerebro (!)\*-spinal system of nerves; but to account for this second and more obscure part of our problem, we must look in vain to any direct anatomical connexion between the fifth pair and the rest of *this* system of nerves. We are forced to seek out other connexions, indeed somewhat more intricate and indirect, but fortunately no less legitimate and definable. We have now to consider a set of organs which, unlike the voluntary muscles, have no connexion, or rather, we would say, emphatically, they *have* a connexion, though indirectly, with the cerebro-spinal system. We mean the abdominal viscera, which we know are almost altogether supplied from the great sympathetic system of nerves. Now, in the prosecution of our inquiry it becomes necessary, to the elucidation of the question, to trace out the same connexion between the fifth pair and the sympathetic or secretory, as we did between the fifth pair and the cerebro-spinal and motory nerves; and then, should we succeed, we will briefly inquire into the bearing which this connexion and its possible results may have upon our question."

"At the fifth annual meeting of the American Medical Association, (1852) held in Richmond, Virginia, not being present myself, I was appointed by a special committee, to prepare an essay on the subject of 'Typhoid Fever,' which essay was read before that body in New York, in May, 1853. In this paper, I took occasion to consider carefully the ganglionic system, in the support of the position therein assumed, *that all typhoidal fevers were manifestations of disease through the secretory system of nerves.* While thus engaged, my attention was called to certain experiments performed by Mous. Claude Bernard, of Paris, and made public through the *Gazette Médicale*, and translated in the *New Orleans Medical Register*, together with his deductions therefrom.

"On examination, finding that they contained what at that time appeared to me the germ of a theory similar to mine, recorded in June, 1850, though he refers to them as 'a set of phenomena *identical* with those occurring in the cerebro-spinal system of nerves, denominated excito-motory by Dr. Marshall Hall,' while I had deduced this *excito-secretory* system (in 1850), saying '*analogg* with, the *excito-motory* system will much assist us in our argument;' and further, inasmuch as this distinguished gentleman's report presented itself to my mind at that time, somewhat in the form of an announcement, I deemed it advisable to appeal to our National Medical Congress, in the following brief memoir, *praying permission to record before them, MY CLAIM TO PRIORITY*, and also my protest against the palm of originality attaching to Mons. Claude Bernard:

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\* After all, it appears that we did not quote quite enough to be understood, hence this interrogation point. Our article on Dentition, from which this is quoted, was a review of *all* the troubles of dentition. In the earlier part, we had been speaking of the convulsive diseases which were excito-motory phenomena, and just at this point we were beginning to consider the secretory phenomena, and thus we say; "heretofore we have," etc.—[Ed. S. M. & S. Jour.]

[*"Abstract from the Transactions of the American Medical Association: Meeting held in the City of New York, May 3rd, 1853."*]

"Dr. CAMPBELL, of Georgia, submitted a paper on a question of priority in reference to the discovery of the reflex relations subsisting between the cerebro-spinal and sympathetic system of nerves.—See *Minutes of the Sixth Annual Meeting*, vol. vi., p. 89."—(pp. 9, 10.)

"In conclusion, let us define the position which, at the end of our investigation, we feel warranted in assuming. It is the following:—That in the anatomy and physiology, as well as in the dependent analogies of the process of dentition, we find ample ground for the opinion that the diseases pertaining to this period may be dependent, and, in many instances, are entirely so, *upon the local irritation attending the process, being transmitted through the cerebro-spinal system of nerves, producing convulsive diseases in the motory apparatus, or through the sympathetic, causing derangement of the secretory organs, particularly of the alimentary canal*, by the sway which it exercises over the arterial system from which these secretions are eliminated."

"In the above brief quotation, it will be observed that the doctrine of the reflex function between the cerebro spinal and sympathetic systems is plainly enunciated, and not only is the physiological fact noted, but we there also have surmised the *transmission of permanent irritation*, or of paralysis from the cerebro-spinal to the sympathetic system, giving rise to various aberrations in nutrition and secretion. This opinion we have held for years, teaching to our classes that there *existed between the cerebro-spinal and the ganglionic system of nerves, a relation similar to that between the sensitive and motor branches of the cerebro spinal, and which Marshall Hall terms excito-motory; while we have termed that between the cerebro-spinal and sympathetic systems excito-secretory.*"—(p. 13.)

"And now, my dear Sir, I will close this already too prolonged communication: as courtesy to you, and justice to myself, were professedly the instigating causes of its indictment, I do most sincerely hope, that in the too earnest establishment of the latter, I have not at any moment even appeared to have forgotten the former.

I am, Sir, with feelings of great respect,

Your obedient servant,

HENRY F. CAMPBELL."

"To MARSHALL HALL, M.D., F.R.S., &c.

It would be unjust to deny that Dr. Campbell has the merit of having first called attention to the excito-secretory sub-system in the year 1850, and that he imposed this very designation in 1853.

So far, Dr. Campbell's claims are undeniable, and I would say "*palmam qui meruit ferat.*"

But Dr. Campbell's observations will be seen to be limited to *pathology*, and indeed to *dentition*, and are the results of mere *observation*, with an occasional *glance at physiology*; no *physiological instance* of the latter being adduced distinctly or emphatically.

Now M. Claude Bernard's labours are *experimental*, and of the most recondite character:

"If the pneumogastric nerves be divided in the neck, the formation of sugar in the liver is arrested; if the *lower* portion of these divided nerves

be galvanized, no effect is produced; but if their upper portion be galvanized, the formation of sugar is restored"!

The fact that a profound interior physiological secretion is one of reflex action is demonstrated!

Other *physiological instances* are freely adduced.

I arrive at this conclusion: the *idea* and the *designation* of the *excito-secretory* action belong to Dr. Campbell, but his details are limited to pathology and observation. The elaborate experimental demonstration of reflex excito-secretory action is the result of the experimental labours of M. Claude Bernard. And now I say—"suum cuique."

My own claim is of a very different character, and I renounce every other. It consists in the vast *generalization* of excito-secretory action throughout the system.

"There is, perhaps, not a point in the general cutaneous surface in which tetanus—an *excito-motor* effect—may not originate; there is scarcely a point in which internal inflammation—an *excito-secretory* effect—may not be excited."

*Every* point of the animal economy is in *solidarité* by a reflex excito-secretory action with every other!

I here observe that this excito-secretory action cannot be designated *diastaltic*. It is certainly *dia-energetic*; but it does not assume the form expressed by the Greek term, *σπασμα*. A new designation is required, and I propose at once the plain and simple one of *dia-centric*. Thus the in-going nerves are *centripetal*; their influence traverses the spinal marrow, and is *dia-centric*; it is reflected along *centrifugal* nerves.

One remark more. The diastaltic system extends to the internal muscular organs, as well as the external. I would therefore speak of

1. *External diastaltic action*, and of
2. *Internal diastaltic action*.

The former has been amply elaborated and traced in my various publications; the latter remains for new investigation.

The former applies to all orifices and exits, and all tubular structures leading to them; the latter to all internal muscular organs—the heart, the stomach, the intestines, &c.

I trust Dr. Campbell will be satisfied with my adjudication. There is in the *excito-secretory* function, as applied to pathology, an ample field of inquiry for his life's career, and it is indisputably—*HIS OWN*. He first detected it, gave it its designation, and saw its vast importance.

I am, Sir, your obedient servant,

April, 1857.

MARSHALL HALL.

### *The American Journal of Medical Sciences.*

We refer our readers to the July number of this valuable quarterly, for a clear, concise, and able presentation of the entire discussion lately subsisting, in relation to the Excito-secretory system, over the well-known initials D.F.C. This journal has ever proved itself a zealous defender of American claims in matters of science, and yet with that catholic spirit which breathes through all its pages, it deals even-handed justice to all. Its able Editor, the Nestor of American Medical Periodical Literature, allows nothing to escape which can add one valuable grain to the garner of

science, and long experience has given him and his able collaborators an amount of discrimination which renders them almost infallible. In making up the chain of evidence for our "letter," it was to the pages of this journal that we turned for editorial records, which served as a bulwark of defence in its establishment. These were signed "D.F.C." We thank Dr. Condie for the care he has taken to present our claim in so fair and pertinent a manner. We thank him too, that, in all his remarks, he has evinced such a spirit of courtesy, kindness, and confidence towards Dr. Hall, so entirely in keeping with our own feelings.

*The Physiological Anatomy and Physiology of Man.* By ROBERT BENTLEY TODD, M.D., F.R.S., Fellow of the College of Physicians, and Physician to King's College Hospital; and WILLIAM BOWMAN, F.R.S., Fellow of the College of Surgeons, Surgeon to King's College Hospital and the Royal London Ophthalmic Hospital; late Professors of Physiology and General and Morbid Anatomy in King's College, London. Complete in one volume. With two hundred and ninety-eight illustrations. Philadelphia: Blanchard & Lea. 1857. Pp. 926, 8vo.

*Clinical Lectures on Paralysis, Disease of the Brain, and other Affections of the Nervous System.* By ROBERT BENTLEY TODD, M.D., F.R.S., Physician to King's College Hospital. Philadelphia: Lindsay & Blakiston. 1855. Pp. 311, 8vo.

*Clinical Lectures on certain Diseases of the Urinary Organs: and on Dropsies.* By ROBERT BENTLEY TODD, M.D., F.R.S., Physician to King's College Hospital. Philadelphia: Blanchard & Lea. 1857. Pp. 283, 8vo.

We have received from the publishers, Messrs. Lindsay & Blakiston, and Messrs. Blanchard & Lea, through Messrs. Richards & Son, Booksellers in this city, the above valuable American reprints, from the English edition. Time and space will not allow us now more than to acknowledge the receipt of them; but we most cordially commend these three books, by our favorite authors, to our readers. We commend them, not blindly nor hastily, but upon the most careful reading. We have read them—studied them page by page and line by line. Our copies, of the lectures, are all noted in pencil on the margins, and the fly leaves indexed for future reference on special subjects. No man can safely write on Pathology unless he understands Physiology well. No man can give safe instruction in Therapeutics unless he has thoroughly investigated Pathology, "the Physiology of Disease." Dr. Todd's Physiology is of the most recondite and reliable character: an earnest and honest investigator for many years, experiment and observation have been the basis of every doctrine he promulgates, and every precept he offers; no one will rise from reading his clinical lectures without feeling that "now my opinion is worth more than it ever was before." We know of no more improving course for a practitioner, old or young, than to read these three works, beginning with the Physiology and ending with the work on Dropsy and Urinary Diseases.

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*The Physician's Pocket Dose and Symptom Book*: containing the Doses and Uses of all the principal articles of the *Materia Medica* and chief official preparations, etc., etc. By JOSEPH H. WYTHE, A. M., M. D., author of "The Microscopist," "Curiosities in the Microscope," etc., etc. 2d edition. Philadelphia: Lindsay & Blakiston. 1857. Pp. 230, 18mo. (For sale by T. Richards & Son, Augusta.)

This is a valuable little pocket manual of medicines and their doses, modes of preparation, action, etc. Its author has done good service in an elementary way to American science. His two other works, "The Microscopist," and "The Curiosities of the Microscope," are the best of their kind, and we see by the North American Medico-Chirurgical Review, June number, that one of them is *highly appreciated* in England, (thoroughly plagiarized.) The present work we recommend, especially to young practitioners. There is much labor in getting up such a work, and the reward is mostly in the patronage it gains. We hope the profession will let it have its reward.

*A Sketch of the Geology of Tennessee*: embracing a description of its Minerals and Ores, their variety and quality, modes of assaying and value: with a description of its Soils and productiveness, and Palæontology. By RICHARD O. CURREY, A. M., M. D., late Professor of Chemistry and Geology in East Tennessee University. Knoxville, Tenn.: Kinaloe & Rice. 1857. Pp. 128, 8vo.

This is an excellent work on the subjects indicated on title page, prepared with great labor, research, and ability, by our *confrere* of the Southern Journal of the Medical and Physical Sciences. It is accompanied by a very complete geological map of the State of Tennessee, by James M. Safford, A. M., State Geologist. The work of Dr. Currey is well calculated to excite an interest in the development of the mineral resources of his State, and her citizens owe him much for his labors. Similar scientific investigations in our own State of Georgia would enhance the value of our lands, and develop our mineral resources, more than a hundred fold. We thank the author for our copy of his valuable work.

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DR. J. S. COLEMAN, OF AUGUSTA.—We are pleased to see the name of our young friend among those who are spoken of in terms of high commendation, in reference to the late resignations at Blockley Hospital. We are not perhaps sufficiently posted as to all the merits of the case between Dr. ——— and the Faculty, but it ever speaks well for a young member, to see him *acting in concert with the body of the Profession* in all questions of Medical Ethics. It is a safe course, because most apt to be right, and we congratulate our promising young friend in having adopted it, at whatever hazard or sacrifice. It was wise to act on the responsibility of the conservative body of the Profession, *they* discountenanced the new appointee on ethical grounds, and for the sake of right, the younger gentlemen did well to act with them.

TRAUMATIC TETANUS.—In a review of a clinical lecture on Traumatic Tetanus, recently delivered at Jackson Street Hospital, Prof. D. F. Wright, of Memphis, Tennessee, thus embodies our views, and reports a highly corroborative case, which occurred in his own practice :

“The first of the two works is a lecture before the Medical Students of his College upon the pathology of traumatic tetanus. His explanation of its phenomena is grounded upon the doctrines of reflex nervous action as now established in nervous physiology. Assuming that the ganglia of the spinal column are chiefly concerned in those motions which have become habitual, and are performed with but little attention or mental cognizance, and that the brain exercises but little influence over them, except when any unusual circumstances so affect the occasions which call them forth as to demand the corrective and controlling influence of the ganglia of the cerebral hemispheres, he suggests that the phenomena of tetanus are occasioned by these cerebral ganglia losing the power of controlling these ordinarily automatic motions; the peripheral irritant having produced a morbid excitement in the inferior centres which at once places them beyond the control of the superior ganglia, and produces in excess the motions which it is the function of the various spinal ganglia to effect. In other words, (to use an elegant illustration of our author,) the spinal column rebels against the brain, and in its agitation dethrones its proper sovereign, and then in the tumultuous and spasmodic motions which ensue, manifests its own abnormal condition of excitement.

“We could wish that . . . . Dr. Campbell had discussed the relations of tetanus and hydrophobia, especially with reference to the existence of a specific virus in the latter disease, a question in relation to which we have long entertained serious doubts. Giving, as we do, a free assent to his rational explanation of the phenomena of tetanus, we can neither see any point in which this explanation fails to apply to hydrophobia, nor do we know of any symptom attending the one which is not also incidental to the other. Both seem to arise from an irritant applied to some portion of a nerve trunk, both to be attended with the production of those automatic motions which are ordinarily attributed to excitement of the spinal ganglia, and in both the customary controlling influence of the cerebral centres seems to be suspended. We have seen even the peculiar spasms of the muscles concerned in deglutition, from which hydrophobia has derived its name, excited in traumatic tetanus exactly as is described in hydrophobia, (of which we have never seen a case) as may be illustrated by the following case :

“In the summer of 1855, we were called upon to visit an Irish boy, aged about 12, who was suffering as follows: He had, about four or five days before, received a lacerated wound by stepping, barefoot, on a rusty nail—this was situated in front of and a little below the internal malleolus; in short, immediately upon the track of the posterior tibial nerve. When we first saw him, the wound was inflamed and ulcerated, presenting a jagged and excavated centre, with periphery of inflamed surface, of dark, livid, red colour. The lower extremities were occasionally convulsed with a slight jerking movement, the extensor muscles seeming to be principally concerned. No affection of the upper extremities, or of the maxillary muscles, except that slight trismus was occasionally observed. The con-



vulsions of the lower extremities seemed to be rythmically repeated at the rate of about four times in the minute, but were hastened and intensified by the sudden contact of any substance, especially cold water. So much was this the case that, although we at first ordered water dressings to the wound, we found it necessary to replace them by a poultice of slippery elm. This, with a saline cathartic, was followed by full doses of morphine as soon as the bowels had been well evacuated. The morphine for a while seemed to control the nervous symptoms, but the morning of the second day they were suddenly aggravated to an alarming extent. Their repetitions first became much more rapid, and shortly were replaced by a continued spasm, which affected all the muscles of the lower extremities, as well as those of the back and abdomen, but especially the former, the position of the patient being that of opisthotonos. Excitability from external contact was much increased, so much so that even the contact of clothing was the source of intense irritation, and we assented to the mother's proposal, as the weather was intensely hot, of divesting him entirely of clothing, and from this time until his death, he continued entirely intolerant of any covering, except, for a few minutes, that of a light sheet. We now (about 8, A. M., of our second day's attendance,) had recourse to the influence of chloroform. We at first ordered m. xv., to be administered internally every quarter of an hour, and the pillow, etc., around his head, to be occasionally sprinkled with ether, and staid to watch the effect of our prescription. Very considerable reduction of all the symptoms followed the second dose, and then ordering it to be repeated, in doses of m. xx., every half hour, we left him, and made our next visit at 12 M. We then found that all the symptoms had returned, the irritability being even aggravated—the slightest touch producing the most violent convulsions. We determined now, as a *dernier resort*, to put him completely under the influence of chloroform as might be found possible, and without limiting the quantity used, kept him inhaling it till, to the astonishment of all his friends, (ourselves included) he sank into a tranquil sleep, every muscle previously strained to a degree which threatened spontaneous rupture, being now relaxed and flexible. Having indispensable avocations in another part of the city, we now gave instructions, that if on awaking the patient should exhibit any convulsive symptoms, the chloroform should be administered in the same manner. We relinquished our attendance till 5 P. M. On our arrival we found every thing changed for the worse; the opisthotonos was so great that, as he refused to lie any other way but face upwards, a pile of pillows had to be placed beneath his back; not only contacts, but the approach of a person to the bed excited the most violent spasms, accompanied with intense suffering, the jaws were now firmly clenched, and the muscular contraction of the features gave the countenance a singularly weird appearance. Nevertheless, the mind seemed untouched. On inquiry we found that he had waked about half an hour after we left him, that convulsions, at first slight, had commenced almost immediately; that, contrary to our instructions chloroform had not been administered, the people having a sort of half superstitious dread of the drug, but that when things had got to their worst, the attempts had been made to administer some by the mouth, which the patient was unable to swallow. We had now very slight hopes of the case, but determined that if anything could be done it would be with chloroform. The father of the boy told us it could not be administered, and he was right this time. A teaspoonful being held to the lips, such

spasms were excited in the throat and fauces that instant suffocation was apprehended, *even the sound of pouring the medicine into the glass excited these spasms, which were accompanied by a rattle in the throat, and the forcing of some frothy mucus through the clenched teeth.* Attempts at administering the drug by inhalation were equally unsuccessful, and we had to leave our patient to the inevitable termination of his calamity which occurred about 8 P. M.

Our object in stating this case was twofold. First, to supply Dr. Campbell with an instance confirming the benefits of chloroform in this affection, the recommendation of this agent being one of the purposes of his lecture, and secondly, to show the great similarity of some of the symptoms to those of "Hydrophobia," had the wound been given by a dog's tooth instead of a rusty nail, the cry of mad-dog would have been raised, and a regular dog killing organized on the spot, and if hydrophobia be a disease distinct from tetanus, who could blame the proceedings? It is our own belief, however, that there is nothing peculiar in the bite of a dog as the exciting cause of these symptoms, nothing specific, nothing more efficient than a lacerated wound from any other cause. To return to the subject of the chloroform, we think no physician will read this statement without coming to the conclusion, that if the chloroform had been administered, during our absence, according to our directions, the life of the patient, already prolonged by its agency, might have been saved altogether."

We think, with the reporter, that had his directions been fully carried out, perhaps, the life of the patient would have been saved. In our opinion, a primary object in the treatment of an acute attack of tetanus is, not so much to cure the disease *immediately*, (this we cannot often expect,) but by the obtunding influence of remedies, addressed to the nervous system, of which chloroform is the principal one, so far to keep the devastating effects of the disease in *abeyance*, as to allow the case to become what is usually termed chronic tetanus. It is the general opinion, that where the patient survives the tenth day, his chances of ultimate recovery are greatly increased. This object of supporting the patient through the acute stage has not, it appears to us, been sufficiently kept in view by most writers on this fearful disease, the idea most prominent ever seems to be, that this is a disease which must terminate fatally very shortly, if not speedily cured, and consequently, the most active, and oftentimes the most exhausting remedies, are successively and rapidly crowded upon the patient, which, as they do not abate the violence of the paroxysms, only hasten the fatal issue. Beyond gentle purgation in the beginning of the attack, with a free evacuation of the bowels once in two or three days after, we are opposed to any measure which savors of a depleting course. Bleeding, while it depresses the vascular system and exhausts the strength of the patient, according to our observation, exalts the irritability of the nervous system, and thus favors the frequency of the paroxysms. We cannot conceive of a case in which it would be indicated as a remedy for tetanus.

*Ohio State Medical Society.*—The twelfth annual session of the Ohio State Medical Society was held on the 2nd, 3rd, 4th and 5th of June, at Sandusky. The number of delegates in attendance was 130. Dr. Isaac J. Hays, of Philadelphia, and Dr. J. C. Blackburn, of Kentucky, who were present, were elected honorary members of the Society. Dr. D. Tilden was chosen President. Many interesting reports were presented, and were referred to the Committee on Publication. Dr. Holston related a case of death which he thought could be traced to the action of veratrum, and expressed his doubts of the safety of using this article as a remedial agent. The only effect produced by it in his practice was the reduction of the pulse. Dr. Harmon had found it beneficial; but Dr. Brennan considered a general prostration the only result.—[*Boston Med. and Surg. Jour.*

**SPIRITUALISM IN BOSTON—CONCLUSIONS OF THE HARVARD COLLEGE FACULTY.**—Professors Agassiz, Pierce, and Horsford, of Harvard College, and Dr. Gould, (says the *South Carolinian*.) the committee selected to pass upon the controversy between the Boston Courier and Dr. H. F. Gardner, respecting the alleged phenomena of spiritualism, after a week's investigation, made the following report:

"The committee award that Dr. Gardner having failed to produce before them an agent or medium who 'communicated a word imparted to the spirits in an adjoining room,' 'who read a word in English written inside a book, or folded sheet of paper,' who answered any question 'which the superior intelligence must be able to answer,' who 'tilted a piano without touching it, or caused a chair to move a foot;' and having failed to exhibit to the committee any phenomenon, which, under the widest latitude of interpretation, could be regarded as equivalent to either of these proposed tests; or any phenomenon which required for its production, or in any manner indicated a force which could technically be denominated spiritual, or which was hitherto unknown to science, or a phenomenon of which the cause was not palpable to the committee, is, therefore, not entitled to claim from the Boston Courier the proposed premium of five hundred dollars.

"It is the opinion of the committee, derived from observation, that any connection with Spiritualistic Circles, so called, corrupts the morals and degrades the intellect. They, therefore, deem it their solemn duty to warn the community against this contaminating influence, which surely tends to lessen the truth of man, and the purity of woman.

"The committee will publish a report of their proceedings, together with the results of additional investigations, and other evidence independent of the special case submitted to them, but bearing upon the subject of this stupendous delusion."

BENJAMIN PIERCE, Chairman.  
Ls. AGASSIZ,  
B. A. GOULD, Jr.  
E. N. HORSFORD.

Cambridge, June 29, 1857.

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## ORIGINAL AND ECLECTIC.

### ARTICLE XXVI.

*A Report on Diseases of the Cervix Uteri.* By JOSEPH A. EVE, M.D., Professor of Obstetrics and Diseases of Women and Children, in the Medical College of Georgia: (Read before the Medical Society of the State of Georgia, at the Annual meeting in Augusta, April, 1857, and ordered to be printed.)

The subject proposed by the Society for a Report—"THE DISEASES OF THE CERVIX UTERI," in its unlimited and widest sense—is indeed extensive, admitting of numerous divisions and sub-divisions, comprehending a large number and variety of structural lesions, simple and malignant, as well as displacements, or mal-positions, such as, descensus, prolapsus, procidentia, retroversion, ante-version, latero-version, retro-flexion, and ante-flexion: it also properly comprises what are generally styled functional affections, amenorrhœa, dysmenorrhœa, menorrhagia, and leucorrhœa, inasmuch as they often depend upon, or result from a morbid condition of the cervical portion of the uterus, and are most rationally and successfully treated, by remedies addressed directly to that part. These are indeed so numerous, that to do justice to them all, would require to write a volume, which is certainly not the design, or desire of the Society, and for which we have neither time nor disposition at present.

Besides inflammation and ulceration; simple, syphilitic and cancerous, the cervix may be the seat of various kinds of tumor, mucous, cellular, fibrous, or malignant, increscent or excrescent, pediculated or sessile.

As we must restrict ourselves to narrow limits, and in accordance with what we believe to be the wishes and views of the Society, our report will be confined to simple inflammation and ulceration, which have of late years commanded so large a share of the attention of the profession, and have been the subject of so much sharp and often bitter controversy. Other affections will only be referred to incidentally, as they may have a relation to, or bearing on these.

In discussing these subjects authors differ principally on three points—the frequency of their occurrence, their pathological importance, and the most appropriate and successful treatment.

With respect to the first—their frequency—the difference is more apparent than real; depending, in the first place, in considering ulceration to be the important and essential condition, and then in disputing about the meaning of the term; whereas inflammation is the essential affection, and ulceration only a consequence or result of comparatively minor importance—the effects, local and general, depend on the existence of inflammation, and are very little, if at all, modified by the presence of an ulcer. Too much stress has, by some authors, been laid on the importance of ulceration.

According to my own observation, the frequency of ulceration depends on what it is considered to consist of—if epithelial abrasion constitutes ulceration, it occurs in a large proportion of cases of inflammation, while ulcers of much depth are rare. I have not kept such a registry of cases as to enable me to determine the relative proportion of cases with or without ulceration—nor do I consider it an important point. Sometimes, when there is no external ulcer, not even superficial abrasion, it is quite possible a concealed ulcer may exist in the cervical canal, not discoverable even by the speculum of the os uteri, an ingenious instrument, invented by Mr. Tiemann of New York, for the purpose of exploring the interior of that canal, and by which it is exposed to view as thoroughly as perhaps is practicable; but I cannot say that I have found it is as satisfactory in its application as some of his other valuable inventions.

According to my own experience, inflammation of the cervix, with or without ulceration, is of very frequent occurrence; and I fearlessly appeal to every candid observer who is in the habit of employing the speculum, in the investigation of uterine diseases, for confirmation of this opinion.

If we would refer to the most reliable and accurate statistical tables, made by those who have enjoyed the very best opportunities for making them, we find that simple ulceration is of very frequent occurrence, including all degrees, from slight epithelial abrasion, to deep and extensive erosion, or loss of substance, in those subjects who have presented symptoms of uterine disease.

By reference to the tables of Dr. Charles West, of St. Bartholomew's Hospital, London—than whom there could be no more candid observer—it appears that ulceration is of very frequent occurrence, not only in those who have had previous symptoms of uterine disease, but in those who have died of other diseases, without any particular indication of uterine affection.

In examination with the speculum of 268 patients at the Middlesex and St. Bartholomew's Hospital, Dr. West found ulceration of some degree in 125; of the remaining 143, 110 presented some affection of the cervix or body, some of which were, most probably, if not certainly, the consequences or sequelæ of pre-existing inflammation. "In only 29 the uterus was apparently healthy." The 268 patients all had symptoms of uterine disease sufficient to justify a specular examination; they would not otherwise have been subjected to it. As Dr. West's mind appears to be fixed on ulceration, is it not highly probable that he may have overlooked or ignored some of the lighter cases of simple inflammation?—cases which, nevertheless, in susceptible individuals, might have produced the symptoms which led to the examination. Might he not also have failed to discover some affections of the body of the uterus, which, when limited, are often not much more perceptible to touch than to sight? Some cases, indeed, might have been rheumatic or neuralgic, exhibiting no signs of inflammation or any of its sequelæ.

In another table Dr. West found, on examining the bodies of 62 women who had died of other diseases, without uterine disease being known or suspected, that in 29 there was uterine disease, and in 17 ulceration, although 19 were supposed to be virgins.

Of 300 patients, with symptoms of uterine disease, examined by

Dr. James H. Bennett, at the Western General Dispensary, there was ulceration of some grade in 222—about three-fourths.

The testimony of Dr. Tyler Smith and Dr. Rigby strongly corroborates the statement of the frequency of ulceration of the cervix. Indeed, we believe, on this point, there is comparatively little difference of opinion among the principal authors who have recently written on the subject. Dr. Robert Lee, however, professes scarcely ever to have seen inflammation or ulceration of the cervix, specific and malignant ulcers excepted. We can only account for Dr. Lee's singular assertion, in one of three ways—either he has not employed the speculum in investigating such diseases, or he has a peculiar definition for inflammation and ulceration, or else he is wilfully blind and will not see.

Dr. Meigs asserts that ulcers of the cervix are not frequent; but he evidently refers to ulcers with decided loss of substance, which accords with my own experience,—indeed it is highly probable that ulceration, deep and extensive, would be much oftener found in the class of patients, from whom Dr. West's, Dr. Bennett's, and Dr. Tyler Smith's tables were made up—paupers in Hospital and Dispensary practice—than in such patients as Dr. Meigs, myself, and others, in private practice, are generally called on to treat—ladies in respectable life and comfortable circumstances, who generally apply for assistance sooner, and in whom inflammation of the cervix is very much moderated in its intensity, and kept from producing ulceration by frequent ablutions, which are very much neglected among the lower classes.

Dr. West's tables—than which nothing could be a more fair and candid statement of facts observed—would alone, without corroborating testimony, be sufficient proof of the frequency of the ulceration of the cervix. But when Dr. West comes to reason from the facts stated, his conclusions are far from what would appear to me, rational and legitimate inductions from the premises.

There is, I believe, great unanimity of opinion in the profession with reference to the frequency of inflammation and ulceration of the cervix, but in reference to the second and third points—their pathological importance and therapeutical indications—authors differ very much. To a calm and dispassionate difference of opinion, there can be no objection; but, unfortunately for the cause of science and humanity, passion too often usurps the place of reason, and vilification is substituted for argument.

Dr. West contends that the very frequency of the occurrence of inflammatory ulceration is a proof that it is of slight pathological importance, rarely requiring special treatment; and farther, he regards the fact that, in 62 women who had died of other diseases, uterine disease was found in 29, a strong argument in favor of this opinion; but how much more rational is the inference of Dr. Bennett, who says, "I, on the contrary, see in it a positive proof of what I have often stated, viz., that the existence, unrecognized and untreated, of a large amount of uterine disease in the female population, is an indirect cause of death. Inflammatory diseases of the uterus and of its neck are essentially debilitating affections, through their reactions on the functions of digestion and nutrition. When, therefore, as so generally occurs, they are *not* treated, they gradually induce a state of debility and anæmia, and of deficient vital energy, which may render the female unable to resist the attack of intercurrent disease, to which she becomes an easy prey. Such at least is my interpretation of this pathological revelation."

How often is the failure to recognise uterine disease due to the ignorance or carelessness of the practitioner?—the sufferings and death of the patient never having been traced to the proper cause, or the influence that uterine disease may have exercised, in rendering other diseases more serious and often mortal, overlooked entirely, or not properly appreciated?

Is it not probable, that many patients die of cardiac diseases, without the true pathology ever having been suspected? but are they of less pathological importance on that account?

If time would allow, it would be an agreeable task for your reporter, and might be interesting to the Society, to examine and comment on the opinions of those who deny the pathological importance of inflammation and ulceration of the cervix; but this would be to transcend our prescribed limits.

Without invoking the corroborative support of those who entertain views similar to our own, we do not hesitate to express the opinion, based upon our own observation and experience, that inflammation of the cervix and its sequelæ are of great pathological importance, whether considered locally or generally, in their bearing on the uterus itself, in its different conditions, unimpregnated, pregnant and parturient; or in their effects on the general system, exciting, by nervous communication, disease in other and often distant organs.



It must be admitted that inflammation, and even ulceration, sometimes exist for a long time, without materially affecting the general health, or in a great degree deranging the functions of the uterus; for we meet with cases in which menstruation continues with surprising regularity, as respects time, quantity, and freedom from pain, without causing sterility, or inducing abortion, and in which the general system does not appear to be cognizant of the local suffering, the disease only evinced by symptoms referrible to the uterus itself; but these are exceptional cases. In a large majority of cases, menstruation is deranged, either as respects regularity of recurrence, in being deficient, or excessive, or in being attended with pain.

Scanty menstruation, or an entire suppression, is frequently attendant on long standing cases of inflammation of the cervix—often persisting after the inflammation has been subdued. It is more difficult to account for amenorrhœa than menorrhagia consequent on inflammation and ulceration of the cervix; it may, perhaps, depend on extension of disease to the body of the uterus, or on involvement of, or co-incident disease in the ovaria; or it may be a consequence of the impairment of general health, consequent on the cervical disease.

Nothing could be more reasonable than to expect that the presence of inflammation would increase the normal hyperæmia, attendant on ovulation, to a morbid degree, requiring for its relief a correspondingly greater amount of effusion which the presence of an ulcer, superficial or deep-seated, would render freer and more protracted, sometimes almost constant; it is now, I believe, generally conceded, that the most excessive and obstinate cases of menorrhagia are connected with, or dependant on, inflammation or ulceration of the cervix, and only to be certainly cured by local applications to that part.

It is so easy to conceive how inflammation, ulceration, hypertrophy, induration,\* and displacement, may render menstruation difficult and painful, that any explanation would be superfluous.

Notwithstanding Dr. Tyler Smith's learned labors, and very scientific and elaborate treatise, it is impossible, on mature reflection, to regard leucorrhœa, in at least a large number of cases, as anything more than a symptom and effect of inflammation of the mucous membrane of the cervical canal and Nabothian glands. Leucorrhœa may proceed from the cavity of the body of the ute-

rus, or from the vagina, as well as from the cervix; but, as Dr. Rigby remarks, it would just be as rational and proper to call expectoration a disease.

The various mal-positions, whether in reference to the pelvis, or the different parts to each other, as in retro-flexion, etc., are generally consequent on inflammation, and are most frequently corrected when the inflammation is removed; such, at least, has been the result of our own observation and experience: inflammation and displacement are generally found to exist and disappear together.

Of late years, pessaries are seldom found necessary, although I am not prepared to subscribe fully to Dr. Bennett's theory of the almost universal causation of displacement by inflammation, or to agree with him in repudiating the use of pessaries. His views, in the main correct, are I believe too exclusive. Cases of prolapsus are occasionally found unaccompanied with inflammation, although it may have preceded and subsided spontaneously; but sometimes though rarely, after inflammation has been subdued, the displacement continues and produces distressing symptoms, which require for their relief artificial support.

Inflammation of the cervix generally causes or predisposes to abortion or premature delivery.

Some women, it is true, are so susceptible that they will conceive, although inflammation, ulceration, or profuse leucorrhœa may be present; they generally, however, have repeated abortions, and if they are fortunate enough to go to full term, they usually suffer very much during pregnancy and parturition, and often subsequently.

But generally such patients fail to conceive, or conceiving, are liable to frequent abortions, usually at the same period of gestation, by which the general health is still farther impaired, and often totally broken down; this is the pathology and explanation of what is termed a habit of aborting—habit being assigned as the cause, than which nothing could be more unphilosophical. After the cervical inflammation has been subdued, these patients, if sterile, generally become fruitful; or if addicted to abortion, pass safely through gestation.

These cases, which were formerly the annoyance and reproach of physicians, are now often most satisfactorily and successfully managed by substituting the surgical for the medical treatment of inflammation and ulceration of the cervix.

The following case illustrates this and several other important results from this mode of practice, so strongly, that its introduction here may not be deemed inappropriate:

Sarah, a mulatto woman, about 35 years of age—the property of Mr. L. Hopkins, of this county—for several years past had had repeated abortions or premature labors, attended with frequent profuse hæmorrhages; she was also subject to menorrhagia and leucorrhœa between her pregnancies. Specular examination revealed inflammation and superficial ulceration of the cervix.

Treatment by cauterization with nitrate of silver and astringent vaginal injections was commenced, in January, 1855; but as she proved to be pregnant it was discontinued the same month, from the mistaken apprehension that it might hasten miscarriage, which was threatened. After repeated dangerous hæmorrhages, she miscarried—the foetus survived a short time. After her convalescence, I advised cauterization to be commenced and continued, notwithstanding pregnancy might again occur, believing that, so far from endangering gestation, it would be the most likely means to prevent another miscarriage. She had no recurrence of menorrhagia; her general health and strength improved; in a short time, however, she ceased to menstruate, which surprised her very much, for she believed it impossible that she could be pregnant, as she had experienced none of the distressing affections usually attendant on pregnancy, from which she had always before suffered very much; nor could she be convinced, until strong foetal movements left no room for doubt. She enjoyed excellent health until quite near the end of gestation, when she accidentally fell and struck her abdomen against some hard body, after which she suffered considerably from false pains, but had no hæmorrhage. At full term she had a natural and comparatively easy labor: her child, which appeared to have sustained an injury, at the time of the fall, was very puny and weak, breathed promptly, but did not survive long. The feeble health and subsequent death of the child were unquestionably attributable to the accident. This woman had a favorable convalescence, and has since enjoyed good health.

Treatment was recommenced November 14th, 1855, and continued, but with great irregularity, (in consequence of living in the country,) until the 8th of July, 1856, during which the cervix

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was cauterized nine times, in about seven months—nearly a month on an average intervening between each cauterization. Could the treatment have been pursued with regularity at proper intervals, it is probable that a third, or perhaps a fourth of the time, and fewer applications, would have sufficed. August the 9th, specular examination shewed the cervix free from every vestige of disease.

In this case, besides the removal of every trace of inflammation, the menorrhagia and leucorrhœa ceased—the predisposition to abortion was corrected—pregnancy divested of its usual annoyances, and labor itself rendered more easy and natural.

Many of the lighter hæmorrhages, that occur during gestation and after parturition, are doubtless referrible to inflammation and ulceration of the cervix. I believe, also, that some diseases of pregnancy, as excessive vomiting, cardialgia, etc., are often only symptomatic affections, depending on, or greatly aggravated by inflammation of the cervix. A very valuable article on this subject appeared in a recent journal. The author gives a number of interesting cases, in which the severe sufferings of the patients, during pregnancy, were fairly attributable to disease of the cervix, and promptly relieved by remedies addressed to that part. Dr. Green of Macon, in his excellent treatise on inflammation and ulceration of the cervix, says “inflammatory disease of the cervix has a powerful effect in aggravating the nausea and other distresses of pregnancy.” It is well known, that when the uterus has become incarcerated in the hollow of the sacrum from retroversion during pregnancy, uncontrollable vomiting has been produced, which has been as promptly relieved by replacement. It has also been satisfactorily demonstrated that congestion, inflammation, and even ulceration of the os and cervix, may sometimes exist during gestation, without any important reaction on the general system; but it is equally certain, that in some cases distressing consequences result.

I have no doubt but that parturition is sometimes rendered more painful and protracted, after-pains more tormenting, and convalescence from labor far less rapid and favorable.

The influence on the general health, as already remarked, is very different in different cases: in some, it becomes soon and seriously affected; in others, very slowly and slightly. It may be

that in the former, the body becomes more or less involved by an extension of inflammation from the cervix, while in the latter, the disease is confined to the cervix.

It is reasonable to suppose this would be the result, from the fact that the body is principally supplied by nerves from the sympathetic, and the neck from the cerebro-spinal system; in consequence of which distribution, the body is more closely associated with other organs, and exercises more influence over them, both in health and disease: the neck is said, by some authors, to be more sensitive, but this is, to say the least, extremely doubtful; it is indeed contrary to the observation of those who have much experience in making examinations of, and applications to, the the body and cervix.

Although I may differ from some who have enjoyed superior opportunities for observation, and have done much for the improvement of uterine pathology, I cannot subscribe to the opinion that inflammation of the cervix rarely extends to the body: I believe it frequently does; and it is then that the general system becomes most affected; but by this I do not mean to express the opinion, that the general system never suffers except when the body becomes involved. There can, however, be no doubt but that the cervical portion is most disposed to become diseased, most exposed to morbid influences, and does most frequently become affected first, and that such affection often continues a long time, without extending to, or involving the body.

The state of the general system is, most frequently, that of debility or anæmia, most probably resulting from the deranged state of the digestive organs, and defective innervation very frequently attendant on uterine disease, or perhaps in some cases from the profuse menorrhagia or leucorrhœa present.

The nervous system very often becomes materially involved, as evinced in the development of various nervous affections, such as the different forms of hysteria, chorea, and eventually epilepsy.

My experience has been, that while in their incipency or in their early stages, especially when only hysterical phenomena are present, nervous affections dependent on inflammation of the cervix will promptly and permanently disappear, after the primary disease has been subdued by appropriate treatment; but if neglected long, they will continue and resist all remedies, however

judiciously and perseveringly employed, although every trace of uterine inflammation has been permanently removed.

Cases might be adduced, in proof of the happy results of prompt treatment, and the disastrous consequences of delay. Unfortunately observation much more frequently records the latter than the former. Medical treatment alone is generally relied on until it is too late for local and special to avail. One instance of each may suffice for illustration:

In the spring of 1854, Miss —, a very amiable and interesting young lady, fifteen years of age, who had been subject for about a year, at each menstrual period, to most distressing paroxysms of hysteria, attended with convulsions and temporary mental derangement, was brought to this city for medical treatment.

As she had been already subjected to very active and persevering medical treatment by an intelligent and skilful physician, without the least amelioration in her condition, it seemed perfectly useless to repeat the same, especially as the symptoms so plainly indicated uterine disease.

A careful digital and then a very cautious specular examination was made by means of Whitehead's small bivalve speculum, which is well adapted for making examinations in cases of virgins. As considerable inflammation and engorgement of the cervix were discovered, the solid nitrate of silver, by means of the speculum forceps, was applied directly to that part, and a blister directed to be placed over the sacral region. The following pills were also prescribed, one to be taken three times a day.

R. Proto-Iodid. Hydrarg., grs. xxiv.

Ext. Hyosciami, " lxxij.

Iron by Hydrogen, 3 iss. Make 36 pills.

After these pills had been taken about a fortnight, one grain of Iodide of silver was substituted for the portion of Proto-iodide of mercury in each pill, for fear of salivation. As it was so extremely unpleasant to subject so young a female to the repeated use of the speculum, after the nature of the case had been determined and one application made of the solid nitrate, I determined, for a while at least, to try the solution, which was administered with a glass syringe by an intelligent and excellent lady who attended on her with truly maternal kindness and tenderness. The solution was used of different degrees of strength, from one to three

drams to the pint of water. This patient never had a paroxysm after the treatment was commenced—rapidly regained her general health—in three months returned home perfectly well—has never had any recurrence, but has since married, and is, I have been informed, in a fair way to become a mother.

The extreme severity of this case, its long persistence and the length of time she had been previously treated by a respectable physician, alone justified so early a recourse to an instrumental or even a manual examination, which otherwise would have been deferred until after the failure of other plans of treatment: her rapid restoration to perfect health rendered a repetition unnecessary.

Another case occurs which presents a very different picture:—Some fifteen or twenty years ago, Mrs. — labored under prolapsus with inflammation of the cervix; treatment, though advised, was neglected for many years, until her nervous system became very seriously affected—at first she had slight nervous seizures with very transient abolition of mind and very slight spasmodic movements, only sufficient to make her stop for a moment when walking, to cease conversing, or to suspend sewing or any other occupation for an instant—such were these fits in their incipency, but they gradually became more intense, amounting to decided epileptic convulsions. When her family became alarmed, her case was thoroughly treated—nitrate of silver was applied repeatedly through the speculum to the os and cervix; all vestiges of inflammation and ulceration were entirely removed, and did not recur, at any rate, for a year or two after, for the speculum was employed to determine the fact.

Blisters were repeatedly applied to the spine, setons were introduced and kept discharging for months, without avail.

For several years she tried tonics, antispasmodics, nervine stimulants, shower baths, change of air, travel and every remedy that promised the slightest hope of benefit; but all without effect.

Uninfluenced, by all the efforts made to relieve it, her disease constantly increased in intensity, until death kindly released her from a condition most pitiable and deplorable—her mind a wreck and her once comely person sadly changed and disfigured by disease.

Had this case been treated before the nervous system had become

involved, she would doubtless have avoided the epileptic affection altogether, and lived long to enjoy life and make others happy, for she was blessed with a good constitution and an excellent disposition.

Several other cases might be adduced to prove that, after the nervous system has become gravely affected, although the uterine disease may be perfectly and permanently cured, the nervous affection will continue.

These may be considered extreme cases—the result is seldom as favorable as it was in the former, or as disastrous as in the latter—most frequently after the uterine affection has been corrected, the general health has improved, and the nervous disease, although not removed, has become moderated in intensity or diminished in frequency of recurrence.

The appearance of my friend, Dr. Wm. E. Dearing, who has just taken his seat, recalls to my mind another very interesting case which I saw in consultation with him. A very intelligent and respectable married lady, from Charleston, had for some time been suffering from very severe hysterical paroxysms which threatened not only to destroy her physical health, but seriously to affect her mind. The speculum revealed inflammation of the cervix; this we regarded as the primary affection from which the nervous disease originated. Seven cauterizations, in about two months, removed the cervical inflammation, and with it all her nervous symptoms disappeared.

Time will not allow us to enquire farther into the effects of cervical disease on the general health—the morbid complications most frequently demanding attention and modifying treatment, are anæmia, gastric and hepatic diseases, hemorrhoids, hysteria, epilepsy and various other nervous affections.

[To be concluded in the October No.]

ARTICLE XXVII.

The Gaseous Treatment of Intestinal Obstructions. By HORATIO G. TATE, M. D., of West Point, Ga.

Speculation in philosophy, and especially in Medical philosophy, is carried to such an extent, that it is not at all an uncommon occurrence for it to amount to a positive evil; it frequently takes the place of scientific facts which bear directly upon natural phenomena, and leads the mind away from the contemplation and study of agents, to the grander subjects of systems and laws. It is far more pleasant to give a loose rein to the imagination, to deal in abstract theories, to study the poetry of science, than curb our fancy down to the stern, unyielding realities of life, and deal with material things as they are, and not as we would wish them to be. It is upon this basis, we wish to invite the attention of the profession to the too frequent occurrence of obstinate constipation of the intestinal canal by *intussusception* or other *mechanical obstructions*. The often unfavorable termination in such cases should induce the honest and candid physician to record and publish every thing he may meet with in his practice bearing upon this point.

The writer is aware that, while he presents something new to the profession, his remedy may, like others, soon be consigned to oblivion; but all he asks of his brethren in physic is to give it a fair and impartial trial. We will not weary the patience of the reader farther, but give the report of our case.

March 15th. Called at night to see Will, a negro man, aged 27 years, suffering from constipation of the bowels. Had taken a dose of castor oil before visit. Complains of soreness and pain over the abdomen; pulse 120 to the minute; considerable tympanitis, with eructations and anorexia; frequently cries out with pain. Prescribed, at 10 o'clock P. M., 40 gra. calomel, with $\frac{3}{4}$ ii. castor oil; warm poultices to the abdomen and salt-water injections—the injections and poultices to be continued through the night, or until the bowels were freely opened.

March 16th, 7 o'clock A. M.—Patient no better. Prescribed four pills, composed of calomel 4 grs., rhei 2 grs., jalap 2 gra. The pills were given in the above dose every three hours, until twelve were taken. During the whole time, at intervals, enemas were used, but returned without either color or odor. At 1 o'clock

P. M., discovered the existence of Inguinal Hernia of the right side: attempted its reduction by taxis, but failed; required the boy to attempt its reduction—he failed. Prescribed tartar emetic until patient vomited freely. Attempted its reduction again by taxis, and again failed. After having failed by the use of tartar emetic, we determined to bleed to syncope, which was done, but again failed in our attempts at reduction.

5 o'clock P. M. Dr. D—— sent for, with the view to operate for Strangulated Inguinal Hernia, who could not arrive in time to perform the operation that evening; consequently Will was doomed to another night's agony. At 10 o'clock P. M., patient commenced to hiccough, which was almost incessant. Soon after this new symptom occurred, stercoraceous vomiting commenced; indeed, the quantity ejected per orem was enormous. Had no evacuation downward from the intestines. Symptoms continued pretty much the same through the night.

March 17th, 8 o'clock A. M. Dr. D—— arrives. Upon being informed of what had been done, proposed putting the patient under the influence of chloroform, and again attempting the reduction of the hernia. The suggestion was adopted. Dr. D—— failed in his attempts at reduction. Whereupon I proceeded to operate for Strangulated Inguinal Hernia, and accomplished in this way the reduction of the strangulated portion of intestine.

At noon, two hours after the operation, patient still continues to vomit and hiccough—says he is relieved of pain at the point of strangulation, but suffers intensely near the umbilicus (to the right of umbilicus). Prescribed $\frac{3}{4}$ iss. of castor oil, and renewal of the injections of warm water, using no salt. This treatment was continued until 10 o'clock at night, at which time I procured a pump syringe, and with it threw into the bowels six pounds of warm water, which was soon ejected without either smell or color; I then proceeded, after the lapse of an hour, to inject water slowly into the bowels, until they retained the enormous amount of one gallon.

Croton oil had been given since 6 o'clock A. M., in 4 drops at a dose, repeated every hour until 16 drops were given, without the least effect upon the bowels being manifested.

March 18th, 2 o'clock A. M. Being well satisfied that an intussusception, or other mechanical obstruction, existed above the strangulated point, and having, as I conceived, used every remedy

worthy of trial in such a case, I determined to proceed upon my own responsibility, let consequences be as they might; therefore, I began again the use of warm water enemas, throwing them into the bowels slowly and cautiously; and after having introduced, by a pump syringe, one gallon of water, I next dissolved 40 grs. of *tartaric acid* in $\frac{3}{4}$ iv. of water, introduced that into the intestine; had a large compress prepared and placed in the hands of a strong negro fellow, with instructions to apply it to the *anus*, and hold it there, so as effectually to prevent the escape of either gas or water after I should introduce 40 grs. of *bi-carb. of soda*, dissolved also in $\frac{3}{4}$ iv. of water. The soda was introduced, the compress used admirably, and poor Will rolling on the floor, crying at the top of his voice, "I shall burst, I shall burst—take that thing away, my bowels are tearing in two." The compress was removed; gas, water and fecal matter escape freely, to the astonishment of all bystanders. In half an hour the same amount of warm water, tartaric acid and soda were used again, and with the same happy effect.

The only medicine given after this, was calcined charcoal, which passed through his bowels with no difficulty. All being well satisfied that the obstruction was fully overcome, and Will declaring himself cured, he was discharged on the 20th.

Now, as to the *rationale* of the treatment, we presume all who are at all familiar with the anatomy of the intestines, or the generation of gases and their expansibility, will readily understand.

In order that the gaseous treatment may be fairly appreciated, it becomes necessary that a partial recapitulation of the treatment be here introduced. By reference, it will be seen that the boy had taken of castor oil $\frac{3}{4}$ vss.; calomel 88 grs.; jalap 24 grs.; rhubarb 24 grs. and Croton oil 16 drops—all of which proved totally ineffectual.

In the successful treatment of this most fatal and alarming disease, I consider the pump syringe an indispensable implement, because more than double the amount of water can be thrown into the intestine with it, than can possibly be introduced with the ordinary syringe. After having distended the bowels to their utmost capacity by warm water and the syringe, then by the introduction of the acid and soda you become possessed of another distending power, well nigh incalculable—not sufficient, however, to rupture the intestine, but amply calculated, in my humble opin-

ion, to overcome any stricture or intussusception of this canal. The amount of carbonic acid gas evolved from 40 grs. of tartaric acid and an equal portion of carb. of soda will occupy about the space of a half gallon, and when this gas evolves, acquires the temperature of the human body, (and it should be retained in the intestine long enough for this to be effected,) it will inevitably acquire double its bulk at the time of evolution.

Thus we perceive, the gaseous treatment in combination with the warm water, is well calculated to accomplish more in overcoming this dreadful difficulty than all other remedies combined; for by it, we first avail ourselves of the relaxing influence of warm water and all the force of the pump syringe; next, we avail ourselves of the power of chemical agents in the evolution of gas; and lastly, but not least in importance, is the expansibility of carbonic acid gas in acquiring the temperature of the human body—which forces, if brought to bear *instantly* upon the muscular coats of the intestine, might possibly rupture the same, but when applied in the gradual manner, as set forth in this article, it is well adapted to the overcoming and unfolding of any mechanical obstruction of the human intestines known to the medical profession, except permanent adhesions.

Croonian Lectures, delivered before the Royal College of Physicians, 1857. By G. OWEN REES, M.D., F.R.S., Physician to, and Lecturer on the Practice of Medicine at Guy's Hospital.

LECTURE I.

ON FREQUENT MICTURITION.

MR. PRESIDENT,—In teaching our art, the plan usually adopted by professors consists in describing each disease in full: symptoms are collected, post-mortem appearances detailed, and the appropriate treatment and diagnosis dilated upon.

This method is valuable in affording us the means of comparing any particular case with the type of the class to which it may belong; imparting a kind of knowledge which all must acquire who are desirous of becoming good diagnostic physicians. There is another method of instruction, however, which may be most usefully combined with that just described.

It consist in selecting for consideration some symptom which experience teaches us to have an important meaning, and to trace it up to each of the causes to which it may possibly be due. At the

bedside we meet with symptoms not only of varying character, but of varying value; and the more important are sometimes the least regarded by the uninitiated, inasmuch as they may not be amongst the more painful.

There are some symptoms which, if they be properly studied, restrict the inquiry within narrow limits, while others bear so general a relation to disease that the mind fails to accomplish the analysis which it easily makes where the less general question is involved. It may be asked, how can we acquire this valuable quality of fixing on these more important symptoms—these indications which direct us more immediately to the truth? This is to be attained by experience only, and it is by its possession that some practitioners are enabled (unconscious of the intermediate mental processes) to detect apparently at a glance that which others may have sought for in vain. The physician's diagnosis is the result of a study of symptoms; one by one he values them, and compares them with some set or class of symptoms which he knows constitutes an especial form of disease. Some inconsistency, perhaps, arises while comparing the symptom he has first selected; in a moment, the train of thought changes. The question, then, arises whether it be consistent in its adjoined phenomena with some other class. The comparison is made again; and eventually an accordance is established leading to the detection of the true nature of the case. Rapidly as this must take place in some minds, still it must needs occur; and this reasoning back from symptoms is what the experts are constantly practising. This method I shall now adopt as the most natural in treating of disease before an auditory already well versed in its general history; and I have selected for consideration, on the present occasion, the symptoms of frequent micturition. This indication, which, under the name of "irritable bladder," is not always so carefully considered as it should be, is productive of extreme misery when present in a marked degree; but there are minor degrees which do not greatly interfere with comfort. The accession of the symptoms may be gradual, and the habits of life of the patient not such as to be materially interfered with by frequent calls to pass urine. On the other hand where social habits or occupation make it desirable that the urine should be held for a few hours, the symptom assumes considerable importance to the patient, however trivial the cause may happen to be, or however easy the cure. According as distress may be produced or not, so we may become acquainted with the symptom, either as the prominent complaint of the patient, or as an incidental circumstance to which he attaches but little importance. Owing to the latter condition, it very frequently happens that this indication is overlooked by the practitioner, so that an obscurity hangs about the case which would at once have been dissipated had the symptom caused more suffering.

I must premise that, in treating this subject, it is not my intention to enter upon the various diseased states of the prostate gland, which

we know may produce irritable bladder. This part of the subject is rather in the province of the surgeon than the physician; and digital examination, in many cases will suffice to determine the diagnosis. As compared with the bladder and the kidney, however, the prostate is far from a common cause of the symptom; and the same may be said of the uterus, which, under certain condition of misplacement, produces great bladder irritation.

Frequent micturition, while it may indicate severe inflammatory mischief in the bladder, may, on the other hand, be a purely sympathetic affection, and it is in this latter case that most difficulty occurs in tracing the symptom to its cause. The separation of the subject into these two divisions is not difficult, since inflammatory disease shows a condition of urine not observed when the purely sympathetic affection exists. When frequent calls to pass urine is connected with cystitis, by whatever cause produced, the urine contains excess of mucus, and nearly always pus, and this latter exists in the excreted urine, partly transformed into *adhesive or ropy mucus*. Blood may be seen also, under some conditions, colouring the adhesive mass in the chamber vessels. When the frequent micturition is merely sympathetic, and indicative of some diseased state in a distant part, the urine is not of this character. It is often clear, or merely deposits the urates, and if any other sediment occur, it is not ropy mucus. The long-continued irritation may, however, eventually involve the bladder; then, of course, the first described set of appearances will be observed. We will assume that we have a case showing the symptom of frequent micturition, and on examining the urine, we find ropy mucus as a deposit. This is occasionally coloured by blood. Albumen is also dissolved in the urine, owing to the presence of pus.

When the condition has been recognised, we may conclude that the bladder is inflamed, and that one of the three following causes is in action:—

1. Calculus in the bladder.
2. Gonorrhœal inflammation of the bladder.
3. Partial paralysis of the bladder.

The symptoms connected with the first-named cause are so familiar to the profession, that they need not be enumerated here. The points of difference between them, and the symptoms characterizing the two other states are obvious enough when calculus in the bladder produces its full effect. Fortunately, however, for suffering humanity, this is not always so, and then the practitioner may find difficulty in forming a diagnosis. Exploration by sounding by no means sets the question at rest if a negative result be obtained. Calculi, as we all know, may escape detection, even when the most skilful and practised hands hold the sound, and yet at no very remote date from such an exploration, may be easily demonstrated, both to the touch and to the ear, by any one who may have the opportunity of making an examination.

A calculus in the bladder sometimes produces scarcely any symptom whatever, save frequent micturition, with occasional pain at the end of the penis. Again, sometimes, even these symptoms exist but in slight degree, and we have hæmaturia complained of, with scarcely any other indication, the patient being able to bear a good deal of jolting without such pain as usually attends vesical calculus. This is especially observed with mulberry or oxalate of lime concretions. But the state to which I would especially draw attention is that in which the calculus causes hardly any symptoms. Such instances are rare, but we now and then hear persons complaining of frequent call to pass urine, and little else; and on examining the urine the indications of cystitis are sufficiently obvious. The frequent micturition is evidently, then, caused by inflammation of the bladder, but on what this depends is by no means so easily determined. If the patient be sounded, a calculus may perhaps be detected, but if it be not found other causes for the cystitis are sought for, and of course sought for in vain. It becomes of the greatest importance, then, to acquire the power of discriminating in these cases. May it not still be a case of calculus, notwithstanding that no calculous has been found? Much depends on our answering this question correctly. In order to do so we must look to the history of our case, and if we can exclude the two other causes for cystitis—viz., the remains of gonorrhœal inflammation, and the presence of irritating urine, owing to the existence of partial paralysis, we may feel great confidence in declaring it probable that calculus exists, and that the exploration by sounding has not done all it may hereafter accomplish.

Of the two other states above alluded to as capable of producing like symptoms, that of gonorrhœal infection is generally easily ascertained by inquiry into the more early history of the case. I am not here speaking of gonorrhœa with discharge, spreading inflammation to the neck of the bladder, and causing acute suffering. This state of matters cannot well be mistaken; but I allude to cases which arise after many weeks' cessation of gonorrhœa, when, with little or no discharge, gonorrhœal inflammation attacks the bladder. The history here might tell us all, but it so happens that the history is not always forthcoming, and the indications may be, and often are, regarded with anxiety, as possibly connected with a calculous tendency, frequent micturition and ropy mucus in the urine being the prominent symptoms.

A case of this kind occurred to me not long ago. A gentleman who had been the subject of gonorrhœa, and who had recovered from all the first effects of the complaint got married. Shortly after he became the subject of irritable bladder; ropy mucus appeared in the urine, occasionally tinged with blood, and this with a slight loin pain, was all we had to guide our diagnosis. The history, however, sufficed to place the disease before us in the true light.

I shall now notice the third condition giving rise to frequent micturition, and to urine impregnated with the results of inflammation—viz., partial paralysis of the bladder. This is a state which very often commences insidiously. The patient does not feel that he has but partially evacuated his urine, and it is only when the bladder becomes inflamed, owing to the irritation produced by retained and stale urine, that frequent micturition causes him to feel anxiety. He now, perhaps, examines, and finds his urine is passed in an opaque, instead of a transparent state, and that a layer of mucus settles in the chamber vessel. It constantly happens that these cases are not diagnosed correctly for some little time, and instruments may be passed in the belief that the cystitis arises from calculus.

Here we depend almost entirely upon history, and on inquiry we may learn that before the appearance of symptoms our patient had been obliged, on occasion, to hold his urine for a great length of time. He may not have observed after this that he passed but little urine when he had an opportunity of emptying the bladder, nor may he have connected any symptom whatever with the above condition. Sometimes the history is more suggestive. Complete retention may have existed at some remote date, owing to a distended state of the bladder. An instrument may have been passed, and the urine drawn off, and the patient may not have suffered any symptoms for many months. Then the complaints arise which we are now considering. If the case be neglected, another inconvenience occurs which should at once determine us. This consists in the urine dribbling away in small quantities, but yet incessantly.

Frequent micturition and the urine of inflamed bladder, if taken in connexion with the above history, will serve at once to distinguish these cases both from calculus and from gonorrhœal cystitis. They are often at first mistaken for the former, and nearly all the patients I have seen with this affection have had the sound passed, and sometimes by more hands than one, without any light being thrown upon the subject.

Before proceeding to the second division of my subject, I would say a few words respecting two forms of cystitis noticed by authors. First, as to cystitis occurring more or less in the character of an idiopathic affection, as caused in irritable constitutions by exposure to cold. This disease has been described, I believe, only because some mechanical or chemical cause has been overlooked. Secondly, we hear of a gouty cystitis. This, which has been described as an immediate consequence of the gouty diathesis, may, I believe, be more correctly regarded as secondarily produced by calculous affection. The irritable bladder in some gouty persons may be clearly traced to sympathetic irritation produced by renal calculus, and cystitis may eventually occur; but I am by no means inclined to believe the bladder liable to a specific gouty inflammation. One argument which has been used in favor of the specific nature of this

inflammatory state, is founded on the fact that relief has been obtained by the administration of colchicum; and were this drug quite inefficacious in all other inflammations, and invariably successful in relieving gout, some weight might be attached to the argument; but in the present state of therapeutical science it bears but little on the question.

Before considering the causes of *sympathetic* irritation producing frequent micturition, I must refer to a question which may very possibly suggest itself to some of my hearers. It may be thought that though sympathetic affections may require analysis with regard to the symptoms under consideration, frequent micturition must be expected in every disease connected with an inflammatory state of the urinary apparatus: in point of fact that it is a necessary concomitant. This, however, is by no means the case; and there is one cause for this form of urine indicative of inflammation requiring more especial notice, as not the slightest irritability of bladder need exist, though the urinary symptoms are otherwise closely allied to those just described. This happens when a calculus becomes fixed in the ureter. Under these circumstances there may be merely such sensations about the urethra as are easily accounted for by the altered nature of the urine, which is generally highly alkaline, and deposits the earthy phosphates if kept. We are well aware how irritating the presence of calculous matter is in the kidney, and in the bladder; and so long as the inflammatory state of the urine is observed we always expect frequent micturition. In the case I now refer to, however, the calculus gives little inconvenience. The history of its first leaving the kidney may be remote, but inquiry will lead to the point, and severe pain be described as having occurred at some date antecedent to the appearance of mucus and pus in the urine. I doubt not that some of my hearers may have seen a case or more in which post-mortem examination has shown the ureter of one side blocked up by calculus, the ureter above greatly distended, and the organ probably undergoing gradual destruction.

Having now spoken of cases of frequent micturition in which the urine gives indications of cystitis, I will proceed to consider the other division of the subject, including those cases in which the secretion is not so materially affected, and which arises from sympathetic irritation of the bladder. This class is a somewhat numerous one. One of the most common causes for the symptom exists in the presence of kidney disease, and especially that known as morbus Brightii. Here the frequent micturition for the most part occurs at night, and the patient may disregard the inconvenience for a length of time. Scarcely any other symptom of the disease may be present, and if this one be not sufficiently valued by the practitioner the malady may escape detection altogether. There may be slight dyspepsia, and perhaps a somewhat anæmiated look. The urine may be clear, and no deposit indicating cystitis present;

but the bladder is irritable. Under these circumstances, the question as to the possible albuminous condition of the urine should at once suggest itself. If this be detected, then it becomes necessary to deal with the question of albuminous urine in its relations to disease, and to determine whether we may refer it in this particular instance to granular degeneration of the kidney. What is it necessary to do in order to effect this? I need not remind my hearers that albumen may be present in the urine merely as a concomitant with pus or with blood. The first step, therefore, should be to ascertain whether or not either or both these be present, and microscopic examination is rarely necessary in order to effect this, as far more than a microscopic quantity of the corpuscles of these fluids must be mingled with the urine to render it albuminous in any marked degree. We will assume that these sources of fallacy are removed, that the urine contains the serous part only of the blood, as in morbus Brightii, and now the question may be asked, upon what other states may this depend? This is an old query. It was the difficulty which occurred to the minds of practitioners when Dr. Bright's discoveries were promulgated. It was thought unlikely that albuminous urine should possess such especial and exclusive significance. Many assertions were made tending to lessen the value of the indication; and had there been any amount of truth in the allegations, albuminuria would long since have been recognised as a very common symptom, existing in numerous diseases, and even occurring under conditions scarcely to be distinguished from perfect health. Thus it has been said that eating pastry or drinking milk in quantity will cause albumen to appear in the urine, and a mercurial course has been supposed to produce the same effect. Some believe it a common concomitant of ordinary colds, and as easily produced by any interference with the function of the skin. The attention I have paid to the subject, with ample opportunities for experience, enables me very confidently to contradict the above statements; but it may not be out of place to mention one or two other objections to the exclusive nature of this indication, possessing more claims to notice.

Albumen appears occasionally in the urine during gestation. Some women have been known to excrete it during every pregnancy, and no evidence has subsequently appeared to prove the existence of diseased kidney. This fact was first noticed by Dr. Lever. Albumen, again, may nearly always be detected in the urine of women suffering from puerperal convulsions. Again, during the progress of cholera asphyxia, the urine frequently becomes albuminous. It is said to assume this state also in typhus; but if this ever occur it is a rare concomitant of that fever, and if it be present it will be well to look to the kidney.

The conditions just described are obviously such as but little interfere with the diagnostic value of albuminous urine, inasmuch as they are easily recognised.

I would, lastly, notice those statements which, were they proved by the facts adduced, would entirely destroy the value of albuminous urine as a guide to diagnosis. A writer of considerable chemical acumen, but evidently ill-informed in the phenomena of disease, and who, like many other chemists who have meddled with pathology, has done much to confuse a very important subject, has declared that "albuminous urine has now been so frequently observed in numerous diseased states of the organism, independent of Bright's disease, that the idea has long been abandoned that granular degeneration of the kidneys always occurs where we have albuminous urine." So far so good. If we except the word numerous, what I have already said is quite in accordance with the view propounded; but our author goes on to say, that albumen exists in the urine of blooming health, and without giving us the sequel, contents himself with describing albuminuria and robustness. The case (if correctly reported) is that of a confirmed, but perhaps early, stage of morbus Brightii. While suffering from a mild catarrho-rheumatic affection, the author found a trace of albumen in his own urine. Next we have a case quoted in which the presence of albumen may have been simulated by phosphates; but even if we allow that albumen was present, there is no account of the after-history, nor of the post-mortem, to set the question at rest as to the existence of morbus Brightii. The patient, in this last case, was the subject of pneumonia, a disease which often complicates chronic albuminous nephritis, and in all probability, if albumen really existed in the urine, this patient had a degenerated kidney.

We next have two cases which are almost certainly true morbus Brightii; the one regarded by the author as rheumatism, the other as dropsy with albuminous urine, but *not* with kidney disease, because as he writes, "*the patient complained of no pain (even on pressure) in the lumbar region.*"

These statements, which are to be found in the writings of the late Professor Simon, of Berlin, have done much to interfere with progress. The merest tyro of our schools could have told our author that patients with morbus Brightii scarcely ever complain of lumbar pain—that it is by no means to be expected, even in the severest cases—that its presence is the exception, its absence the rule; and that the same remark applies to pain produced *by pressure* over the region of the kidneys.

The carefully collected records of hospitals have now satisfactorily determined this question; and it may be confidently stated, that albuminous urine indicates either a degenerated kidney, or some state of the organ preceding degeneration; and that the sources of fallacy are not material, consisting as they do of conditions which can be easily recognised—such as pregnancy, puerperal convulsions, and cholera asphyxia. I would add a precaution here, however—viz., not to draw any inference from the examination of urine obtained after death, when albumen may be often detected as a result of transudation.

Among the causes for frequent micturition (irritable bladder) we find brain affection has been enumerated; but from the accounts we read of these cases it appears highly probable the cerebral condition described was merely one of the concomitants of kidney disease, which it was not possible to recognise before medical literature had been enriched by the writings of Dr. Bright, and before his discoveries had been promulgated. Surgical writers have spoken of this form of irritability,

There is a state of urine to which I would now direct attention, as occasionally productive of frequent micturition but which easily admits of relief. It consists in an increased acidity generally observed in gouty subjects. Uric acid is occasionally seen as a deposit, but not always so at the commencement of the malady. These cases sometimes occur in connexion with albuminuria, and the fact is an important one, because it seems to constitute a point of difference in the views of those whose acquaintance with the subject of albuminuria is profound, and whose experience has been most extended. The question lies thus:—If a patient passing uric acid pass also albuminous urine, and if these conditions continue many months, is the case necessarily one of kidney degeneration? M. Rayer, with whom I had a most interesting consultation last summer, holds that the gouty or uric acid diathesis may affect the kidney, causing a degeneration of its structure (Bright's disease—*"néphrite chronique albumineuse"* of the French,) or it may, on the other hand, cause a discharge of albuminous urine (in consequence of the uric acid crystals irritating the tubules,) without any degeneration of the kidney occurring as a consequence. This latter state may last, it is said, for months, and, according to this doctrine, even after some year or two, the case is not to be condemned as necessarily connected with degenerate kidney. The concurrence of uric acid deposit with albuminous urine was noticed by Dr. Prout, who even went so far as to believe in a necessary connexion between the two. Uric acid, however, is so familiar to us as a deposit without albuminous urine that this necessary relation cannot possibly exist. When, however, the two happen to occur together, we have a condition admitting of the two interpretations just given.

The persistence of albumen month after month has been considered by Dr. Bright and his followers as necessarily indicative of organic change in the kidney, and that this is generally the case cannot be denied. We see the fact constantly proved in our hospitals; but the question still lies open as to whether the uric acid crystals may not cause albuminous urine to appear for many months, or even longer, by irritating the tubules. We frequently hear of cases of albuminous urine going on for years and years without any very serious inconvenience to the patient. We hear also of cases which have been cured, the patient remaining well for years. Let us consider whether we are to believe in this less hurtful albu-

minuria, and whether the cases which appear to admit of relief are those in which the irritation of uric acid crystals is causing the albuminous discharge, without any organic disease being necessarily present in the kidney. Since my attention has been directed to the point, I have had two opportunities of observing albuminuria in connexion with the uric diathesis. The albumen was present in abundance, but disappeared under alkaline treatment in one case almost immediately.

Here we may have had an early case of Bright's disease in a gouty subject, which was relieved by treatment, or, it may have been a case of irritation of the tubules by uric acid, as described by M. Rayer. For my own part, the rapid relief from alkaline treatment inclines my belief strongly to the latter view, and it appears probable, that though gouty subjects are prone to Bright's disease, they yet may pass albuminous urine from another cause.

But what are we to say to cases in which the albuminuria persists for months or years? Are we to believe in the possibility of this discharge of albumen continuing, without the kidney being organically diseased? My conviction was strongly against such a belief, but that opinion has been somewhat shaken of late.

It has always been a puzzle to explain the old case referred to, in which *morbus Brightii* is born with apparent immunity, and I am by no means satisfied but that an explanation may be found for this apparent anomaly in the condition noticed by M. Rayer.

I have at present a patient under care, who has passed albuminous urine for six years and more, whose state of health, so far as we can judge, is perfect. Strong, active, and energetic, she repudiates the idea that she is an invalid. She is of a gouty family, and has occasionally passed uric acid. The urine has never been of low specific gravity, no fibrinous casts have ever been detected, and there is no evidence whatever that the blood or other fluids have become degenerated in any way. Alkaline treatment has answered well in this case. Under its use, the albumen has disappeared for days and days together, and though it is still occasionally found, it is always in very small quantity.

If ever a case existed capable of clearing up the difficulty I have alluded to, this is the one. Can the gouty diathesis, with its uric acid crystals, be causing the albuminous urine, or have we a case of true *morbus Brightii*? Post-mortem examination alone can determine this.

The next cause for frequent micturition which I shall notice consists in the presence of calculus in the kidney. Here the irritation is often most excessive, and there is the greatest difficulty in persuading the patient that his bladder is not diseased. These cases are generally amongst the most satisfactory that can fall under our care. Little is to be done, and doing little or nothing is often a hazardous step as regards the fame of the practitioner. You cannot expect the suffering and ignorant patient to believe in your

declaration that he must still suffer on till some lucky accident either expel the calculus or enable it to become encysted, and he will fly to those who in accordance with his own views, may proceed to treat him for disease of the bladder. I have known these cases regarded as dependent on irritation of the neck of the bladder caused by stricture, and have seen the most lamentable results brought about by the violent measures resorted to for relief.

The correct diagnosis is not very difficult. The history generally tells of hæmaturia, probably at some remote date, and of occasional loin pains and uneasiness. The general health at first is but little disturbed. The urine shows none of the indications of cystitis, is generally clear at first, but in old cases it becomes slightly clouded. This cloudiness is dependent on the presence of pus, which exist in small quantity. We must not expect to find hæmaturia a warning symptom. In many instances it is certainly present, and our diagnosis is then more easily made, but if hæmaturia do not exist at the time of our seeing the patient, and when we have an imperfect history to guide us, the case cannot be determined so easily.

Frequent micturition, with small quantities of pus in the urine, loin pain, and lassitude, if we have an early history of hæmaturia, should guide us to diagnose renal calculus; and even if frequent micturition and a small quantity of pus be the only symptoms, we shall generally be right in giving the above opinion, even if history fail to afford us evidence of hæmaturia. The presence of a small quantity of pus in the urine would appear easily explained in its relations to renal calculus.

The hollowing out of the nephritic structure, which we find occurring in order to make room for calculi about to become encysted in kidneys, must have been effected by a gradual process of disintegration, and this we know is preceded by inflammation. The purulent discharge would thus seem to attend the formation of a convenient cavity for the lodgement of the calculus. So long as this action is going on, the patient will pass pus in the urine, and it may be some years before matters are adjusted. The constitution has much to go through. A scrofulous taint leads to abscess in the kidney and death. The more fortunately constituted generally do well, provided they can be induced to avoid the catheter and the sound.

In speaking of the condition of the urine in this calculous affection of the kidney, I have made use of a somewhat indefinite expression—viz., "a small quantity of pus." By this I would wish my readers to understand an urine depositing a yellowish-white sediment, but not in such quantity that the patient's attention need be attracted by it. It renders the urine but slightly turbid as it is passed, or when the deposit is shaken up in it.

This is the general state of things when nephritic calculus is encysting, or when it fails to find its way down the ureter, provided

constitutional causes do not interfere to produce suppurative disease which may appear in the form of pyelitis or of general abscess of the kidney. This purulent impregnation is constant, and if it fail to show itself, so as to be evident to the unassisted eye, the microscope rarely fails to demonstrate the presence of pus so long as the bladder is irritable.

There is a cause for frequent micturition so nearly connected in its symptoms with that last noticed, that it naturally suggests itself in this place. It consists in a state of kidney known as strumous kidney, or phthisical kidney, as some authors have designated it. If calculous disease develop itself in a strumous subject, we find very early that abscess results, but in all subjects some amount of pus may be expected during the time of encysting. In phthisis of the kidney, however, the bladder becomes irritable, without any evidence of a calculous disposition; and we find that pus can be clearly proved in the urine. The symptoms are generally at first considered to depend on calculus, and it too often happens that the disease has made great progress before the real state of the case becomes evident. The symptoms are at first nearly identical with those of nephritic calculus. The same degree of sharp lumbar pain, however, is not present, and there is no history of hæmaturia; but the symptoms presenting themselves at the time of examination bear a striking similarity; and if the previous history be not ascertained, a diagnosis is next to impossible. It is both for the advantage of the practitioner and of the patient that this distinction should be early made; for if calculus be the exciting cause, of course our prognosis will be more favorable.

The two points for consideration are—1st. The diathesis of the patient. 2nd. The history as to hæmaturia. If frequent micturition and purulent urine, such as I have described, be present in a strumous person, and we have no history of hæmaturia, we may diagnose phthisis of the kidney. If frequent micturition and purulent urine co-exist with a history of hæmaturia, then, in all probability, there is calculus. We must not conclude, however, that because calculus is present we have no fear of the worst results, for if the patient be of strumous habit, abscess may result as a consequence. In all cases, however, the history of hæmaturia is an advantage, inasmuch as even should the patient be strumous, the calculus may be voided, and the exciting cause of mischief being thus removed, the kidney may recover itself, and the patient do well.

It is not many months ago that I saw a remarkable strong young man suffering from loin pains and general malaise, in whose urine small quantities of pus were nearly always present. The case interested me much, and I looked with some anxiety for the previous history. There was a strumous diathesis; and from the moment I made my examination, I felt certain that all depended on the history involving hæmaturia or not. In any case, the strumous diathesis made it a serious affair; but in the absence of hæmaturia, the only

conclusion which could be arrived at was that the nephritic mischief had resulted purely from struma. As phthisis of the kidney progresses, we may have enormous quantities of pus evacuated. It is only therefore, to the commencement of the disease that my remarks apply; when, with frequent micturition, we have the slightly purulent secretion simulating calculous mischief.—[*London Lancet.*

Cases of Early Catamenia. By JOHN T. MARABLE, M.D., of Memphis, Tennessee.

CASE I.—As I was passing by the house of Mrs. C., living in Montgomery County, Tennessee, during the Spring of 1853, I was called in and consulted by the lady, in regard to a negro girl, eleven years old, who, she stated, had been troubled with a regular discharge resembling, more than anything else, the monthly sickness. She had been troubled with the discharge nearly two years. At first it was pale, and of a yellowish hue, small in quantity, but coming on very regularly. In the course of a few months the quantity became increased considerably, and assumed a more florid color. The girl was called in, but could give but little information about it. She said about two days before it came on, she felt a little sick in the stomach, and that her back ached a little, and her head felt giddy, but after the discharge came on, all of the above symptoms subsided, and she then felt as well as she ever did in her life. It generally lasted from two to three days. Her breast and organs of generation were not larger than ordinary girls of her age.

We concluded to leave her entirely in the hands of nature, and watch the case as strictly as we could. Her mistress informed me occasionally that she was doing very well, and that the discharge still continued.

During her twelfth year she grew very rapidly indeed, so much so, that I hardly knew her after the lapse of a few months. Her breast had grown considerably, and her genital organs had taken on all the characteristics of womanhood. The latter part of '55, I was summoned to see her about 9 o'clock at night, and found her in the second stage of labor. In the course of an hour and a half she was delivered of a full grown, healthy, female child. She resumed her accustomed work, about the usual time, and enjoyed perfectly good health for nearly twelve months, at which time she died very suddenly, perhaps from apoplexy or disease of the heart. Her child is still living, and appears to be in the full enjoyment of perfect health. Notwithstanding she was a mother, she retained up to her death many of the plays and notions of a child.

CASE II.—*June 7, 1854.* I was called to see a negro girl, ten years of age, belonging to Mr. B., of Montgomery County, Tenn., and learned from her mistress, that the mother of the girl had called her attention to a discharge that the girl had been troubled with for the last eight or ten months previously, coming on, as she thought, very regularly, every month. She appeared to be very well grown for her age, and remarkably healthy. There was but little pain or uneasiness, if any, about the back, abdomen or head, previous to the appearance of the discharge, as is generally the case, notwithstanding the discharge was tolerably copious, and lasted for four or five days. Upon examination we found her breast not at all enlarged, nor her genital organs in any way larger than common. She was left entirely to nature. The discharge kept up until the following October, at which time she had an attack of typhoid fever, lasting some six or seven weeks. During the progress of the fever the discharge failed to make its appearance; after her recovery it again appeared, and has kept up regularly ever since—I having received a letter from her mistress to that effect—and also that she has grown very much within the last six months.

CASE III.—*September 9, 1855.* I was called to see a negro girl, eight years old, belonging to Mr. T., of Montgomery County, Tennessee. The mother of the girl becoming alarmed, owing to the absence of her mistress, sent for me. I enquired into the history of the case, as well as I could under the circumstances, and learned from the mother that the little girl had had a slight discharge from the vagina for some considerable time; that the first time she noticed it was about a year previously, but she did not think much was the matter with her, and it would soon pass off, but it had come on that morning, and was so much more than common, and her mistress being absent from home she thought she had better send for me. She had but little appetite for a few days before and after its return, but made no other complaint. She was examined as minutely as possible, but we could find nothing unusual about her size, or the growth of her organs of generation. The discharge lasted three or four days, and passed off gradually, assuming a pale yellowish color. The fifth of November she was taken with a peculiar form of fever, which prevailed in a great portion of the above country in 1855 and 1856, which appeared to be "mongrel" in character, and taking on both the symptoms of bilious and typhoid fevers. She was confined to her bed for about five weeks, the discharge failing to come on at its regular period. The latter part of December she had an attack of pneumonia in the left lung, which lasted ten or twelve days. She recovered very slowly, being worn down very low in flesh from the severe, continued fever she had labored under. The discharge did not present itself until the following June, at which time she

had regained her flesh. From this time she grew very rapidly, and is now putting on all the characteristics of womanhood. Her disposition in many things, however, still continues that of a child.

CASE IV.—June 3, 1854. I was attending the family of Mr. P., of Montgomery County, Tennessee, and was consulted by Mrs. P. in regard to a negro girl, twelve years of age, who had been troubled with a discharge from the vagina, resembling the menses, for some ten or eleven months. The mistress felt some degree of uneasiness about it, thinking surely it could not be her monthly sickness making its appearance at so early an age. She desired something done for her, if possible, stating that she was an excellent nurse and house-girl, and one with whom she could trust her children at all times, without any degree of uneasiness, and of course, would dislike very much to lose her. I relieved her uneasiness of mind, as well as I could, by telling her that I supposed it was her monthly sickness coming on naturally, but at a much earlier age than is usually the case. No treatment at all was prescribed for her, leaving her entirely in the hands of nature. A few months afterwards I was called to see her at night, in haste, the messenger stating that she had had a fit late in the evening, and they thought she was dying when he left home. When I arrived I found her to all appearance insensible to all around her; her pulse was feeble and frequent, her respiration panting and laborious, with an occasional deep sigh, with the escape of some frothy mucus from the mouth and nose; her pupils unaffected as far as we could discover. After examining her as minutely as we could, we supposed it to be a case of hysteria, and treated her accordingly. After a short time the distressing symptoms disappeared, and in a few days she resumed her accustomed labor. It is proper to state, however, that her catamenial period had passed off some four or five days previous to her attack, and was quite scant in quantity and of a pale yellowish color. Two months afterwards she had a second attack, which lasted but a few hours, was very light in its character, and passed through it without any medical aid; seven months afterwards she miscarried with a male foetus, at about the fourth month. Nothing unusual occurred after her confinement. The discharge made its appearance again in about three months, and she has since been in the enjoyment of perfectly good health.

All the cases of Early Catamenia that I have seen, have occurred in negroes. An interesting question arises, whether these were idiosyncracies, or whether they arose from a recurrence to the original constitutional type of the race, early menstruation being a characteristic of the native African tribes; if the latter, then a return to generic peculiarities, long obliterated by a change of climate and habits may possibly have some bearing on abstruse ethnological speculations.—[*Memphis Med. Recorder*.]

On Contagious Furunculoid. By Dr. LAYCOCK, Professor of the Practice of Medicine in the University of Edinburgh.

In this lecture Professor Laycock says he was the first to point out that boils were ever epidemic, and that they were associated, as to cause, with other eruptive diseases. This he did in a clinical lecture he delivered at York, in February, 1851, and published at the time. At the same time he laid much stress on the contagiousness of this affection. He now adduces some interesting facts in relation to these points—observing that up to 1851, the epidemical relation of the *materies morbi* to malignant pustule, phlegmon, and onychia, had not been manifested. Dr. Laycock proceeds:

"In my published lecture of February 25th, 1851, I illustrated several varieties of the disease by cases, and indicated the following principal forms: 1. Simple furuncle. 2. Effusive inflammation of the derma, manifested in the form of eczema, pemphigus, and phlyctenæ. 3. Suppurative inflammation of the derma, resembling impetigo and ecthyma. 4. Carbuncular inflammation. 5. Two or more of these occurring coincidentally. More recent observation shows that we may add to these—6. Sloughing gangrene of the lip, eye, tongue, vagina, scrotum, etc. 7. A diffused inflammation of the cellular tissue, returned to the registrars, as a cause of death of late years, under the term phlegmon. 8. Another form, seldom fatal, that of whitlow. I will now refer to each of these specially.

"1. *Simple furuncle.*—The course of the simple furuncle is very definite. An itching is usually first experienced, and then a small hard pimple may be felt in the skin, not larger commonly than a small pea. This enlarges from day to day, and the skin becomes red over it. About the fourth day the centre softens, and on the fifth suppuration is established, with partial destruction of the subcutaneous cellular tissue (the slough or 'core'). By the seventh day there is commencing cicatrization. Rarely more than four or five of these occur at once.

"2. *The furuncle, with vesication or pemphigus.*—In the furuncle with vesication, the inflammation is preceded by a vesicle; the pruritus is greater, the erysipelatous redness more extended, and, in bad cases, true phlyctenæ form. These may be prolonged to the fourteenth day. In a few rarely occurring cases there is a phlyctenæ only.

"3. *Ecthyma.*—In the impetiginous and ecthymatous form, the boils are usually interspersed with ecthyma, impetigo, or eczema. It is not uncommon to find this variety preceded by a pemphigoid eruption, in which the serum is opaque and purulent, and terminating in crusts. This sometimes attacks the eye, constituting a sty.

"4. *The Carbuncular form.*—When the disease is carbuncular, it may appear as true carbuncle, or as a spurious form, in which

there is, in fact, a confluence or blending of furuncles. Both these are usually seen on the nucha, back, or loins. The true carbuncle may be either solitary, or, as is common, may arise amongst a number of furuncles.

"The eruption in all these forms is usually seen on the back, nates, thighs—less frequently on the legs and face, still less so on the trunk. The bend of the joints, or the ends of the fingers (as in whitlow,) are not unusual situations. The seat of the disease will, however, depend upon the nature and locality of the exciting cause. Wherever a local irritation is induced, there will most probably be the seat of the specific inflammation. A blister is one of the commonest of the exciting causes; the application of a poultice, or of an irritant ointment, a slight blow, and the like, will also act as exciting causes of the disease. A crop of boils is a not unfrequent occurrence after an eruptive fever, as variola, scarlatina, the 'dengue,' etc. In these cases the cutaneous inflammation operates as an exciting cause, in the same way as the inflammation consequent upon a blister.

"The accompanying constitutional disturbance varies much. In healthy individuals it is not at all well marked—in the cachectic the tongue is usually coated, sometimes brown, the appetite impaired, the bowels constipated: occasionally rigors and febrile reaction are manifested, and great debility felt. This disease became prevalent in the clinical wards of the Royal Infirmary of Edinburgh during June, July, and August last, subsequently to the admission of a Dane, resident in Leith for nine months, who was affected with the pemphigoid and impetiginous form. In him it appeared principally over the sacrum, as a vesicle, followed by a superficial ulceration, surrounded by an inflamed areola, and covered by a thick crust. Interspersed among these were isolated pustules, with an indurated inflamed base. Under the use of quinine, with mineral acids and warm baths, the pemphigoid characteristic disappeared, but the impetiginoid furunculi were more numerous and larger. Unfortunately, other patients in the ward used the same bath in which this patient bathed, and when some of the crusts from his body (it was reported) were floating upon the water. Several of these were attacked with the same furunculoid eruption. The following history illustrates the origin and varied forms of the disease: on the 3d June, George Stewart, Ward 11, had a blister applied between his shoulders, which ran the usual course. On 11th June he complained of a pain in the seat of the blister, and on examination it was found that a number of pustules, with an indurated base, had appeared there, principally upon the upper and right edges of the space which the blister had occupied. They varied in size from a pin's head to a four-penny piece; some got no larger, but others increased in size, and suppurated, so that a whitish tenacious fluid could be squeezed from them. On the evening of the 16th June a large poultice was

applied; next day blebs, like those seen on the Dane, were observed to be intermingled among the furuncles, containing an opaque purulent fluid, while near the angle of the right scapula, one of the furuncles was fully an inch in diameter. This at last became a large carbuncle, about three inches in diameter, containing the usual sloughy tissue. Another large boil also showed itself on the back, lower down, which, on being incised, was found to contain blood only. The treatment ordered in this case was the water-dressing to each separate boil, the careful removal of their contents, and the most sedulous attention to cleanliness. The result was a check to any further formation of furunculi.

"5. *The phlegmonous, phagedænic, and gangrenous forms.*—These seem to occur in individuals who, from some pre-existent morbid state of the blood and of the nutrient forces, are already in such a condition that the ordinary sloughing inflammation of the phlyctena, furuncle, or carbuncle, becomes exaggerated into rapid death of the tissue. The lip and vagina in children are specially prone to become the seat of phagedænic inflammation, not unlike hospital gangrene; more rarely, the scrotum and perinæum in the aged. The late Mr. Harvey Ludlow (when house-surgeon to St. Bartholomew's) called the attention of the profession, in 1852, more particularly to carbuncular inflammation of the lips and other parts of the face; Mr. Stanley and Mr. Lloyd have also observed the affection, and noted its alliance to carbuncular and furuncular inflammation. Happily, these cases are comparatively rare, for the destruction of the tissues is frightful as to extent and character.

"6. *Onychia or whilow, and suppurative inflammation of the fingers and palms, and the palmar and digital sheaths of tendons.*—These forms seem to be of rarer occurrence in the United Kingdom than in the United States and on the Continent. They are not unfrequently followed by contractions of the fingers, caries, etc. They are probably due to circumstances which bring the poison into immediate contact with the hand and fingers. I shall shortly adduce facts in illustration of this view. Dr. Hamilton Kinglake, of Taunton, has specially recorded the prevalence of whilow in Somersetshire, in conjunction with boils and carbuncles.

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"Before entering upon the etiology, it will be useful to examine the pathological anatomy of the disease. It is primarily an inflammation of the derma and of the subjacent cellular tissue, ending variously, in accordance with varying conditions. When it attacks the surface of the derma, effusion of serum, of a sero-purulent fluid or of a bloody ichor, is the result; when it attacks the derma proper, the various forms of furuncle, carbuncle, or anthrax, occur. It is an almost universally accepted theory, that the 'core' of the suppurating tumor known by these names consists of sloughing cellular tissue, combined with exudative deposit; and that the slough is consequent upon strangulation of the blood-

vessels of the part by the distended and resisting tissues that surround them. There are various reasons for adopting this theory, if it were only necessary to explain the simple furuncular or carbuncular form of the disease. For example, it is in accordance with the theory that carbuncles and large furuncles are the most prevalent in those portions of the surface where the skin is the most dense, as the neck, back, nates. It is also in accordance with the theory, that the sloughing should be most extensive in those individuals in whom the vital energy is feeble, and a cachectic state is present which predisposes to inflammation of an asthenic type, such as that complicating nephria. But there are various phenomena which the theory does not explain. It does not explain the more diffuse inflammation and suppuration of the cellular tissue known as *phlegmon*, or that gangrenous form which attacks portions of the skin not at all dense, as the lip, vagina, and scrotum; and above all, it gives no explanation of that rapid and fatal gangrenous form of carbuncle known as the *pestis carbuncularis* of horned cattle, and which, when that disease is communicated to man, is *charbon* or the malignant pustule.

"These residual phenomena point, therefore, to another cause of the characteristic inflammation. This is probably a specific and communicable *materies morbi*, the operation of which, upon the living tissues, is to devitalize them. Experience and observation as to the spread of the epidemic, have convinced me that this doctrine is so important an element in the etiology, that without it we have in fact no trustworthy clue to the pathology and treatment.

"I have observed that the *materies morbi* of the contagious furunculoid is communicable—1, from one individual to another; 2, from one portion of the skin to another portion, in the same individual; and 3, that if this communication be thoroughly prevented, the progress of the disease in a family or in an individual is arrested.

"I have already mentioned examples of the probable communication of the disease from one individual to another, as having occurred in the clinical wards of the Royal Infirmary of Edinburgh. In a similar way, it has been repeatedly observed to spread through families, schools, asylums, etc., where no precautions have been taken to prevent contagion. In such examples, it will usually be found that the affection, although slow in its progress through the population, attacks equally in succession the strong and the feeble, going on unmodified by diet, temperature, seasons, etc. Often, on inquiry, it will be found that the members of a family have had the disease subsequently to the admission into the family circle of a person affected with it. And inasmuch as no other reason can be assigned for its spread, which shall with equal comprehensiveness explain it (all theories as to peculiar atmospheric conditions, peculiarities of diet, etc., proving

insufficient), it is a reasonable and philosophical conclusion, that it is communicated from person to person.

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"The recent furuncular epidemic appears to have been generally prevalent throughout the world—certainly in the European and American continents, throughout the United Kingdom, and in all the British colonies. In England and the United States its appearance has been coincident with various epidemics. Typhus, influenza, cholera, small-pox, scarlatina, measles, hooping-cough, and croup, were epidemic in London, in successive years, coincidentally with a largely increased mortality from phlegmon and carbuncle. In the years of the maximum mortality—namely, 1853 and 1854, the prevailing epidemics were cholera, scarlatina, measles, hooping-cough, and croup.

"In the summer of 1850, boils were widely epidemic throughout the United States; they were described as being 'almost universal,' and carbuncles as being common. The epidemic was co-extensive with a lichenous febrile eruption, termed 'prickly heat,' and with the 'dengue'—an eruptive fever, having points of similarity with both influenza and scarlatina. In this epidemic the furuncular eruption was often a substitute for the ordinary cutaneous inflammation.

"The etiology of the ordinary, sporadic form of the cutaneous inflammations I have considered, does not throw much light upon the etiology of the epidemic. The recognized pathology of boils is, I am inclined to think, in a great degree erroneous; it is certainly a fallacy that they are depurative. Those which occasionally supervene in persons undergoing a rigid course of hydropics, are usually mentioned as illustrations of this theory; but it appears just as reasonable a conclusion that the copious imbibition of water induces such a cachectic state as constitutes a highly predisposing cause of this peculiar form of inflammation. I certainly think that a patient is free from a fertile source of depressing irritation when he is free from them, and that if they occur, the sooner they are cured the better. One great fact, however, stands out distinctly, the severe forms of furunculoid, are constantly associated with cachectic states."

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Dr. Laycock adds in conclusion: "I have already indicated some of the sources of the *materies morbi*, but it is certain, I think, that these are not all. The local inflammation is of a kind induced by various septic poisons. Of these, that which appears to be generated during a severe and prolonged parturition, is one; probably the poison of puerperal fever is another, and of the Levant plague another. It remains to be determined whether the various poison may not, under certain circumstances, be the *materies morbi*: it may be equally a question whether the flesh of animals, dead of dysentery, typhus, pleuropneumonia, etc., may not, when

used even as food, be a means of communicating the disease. As to all these points, there are analogies in the natural history and behaviour of epidemical and communicable fever-poisons, such as to warrant cautious and careful inquiry."—[*Edinburgh Med. Jour.* and *Ranking's Abstract*.]

On Circumscribed Atrophy of the Skin. By Dr. REUSS.

Dr. Reuss reports two cases of a disease of which he states he has found no description in authors, and which appears to be almost identical in its characters with what we ourselves witnessed in April, 1856, in a young woman.

A lad, æt. 15, at the end of 1855, had typhus, and while at its acme several parts of the skin were observed to undergo a peculiar change. They assumed a reddish-blue or reddish-brown color; under a slanting light appeared whitish, as an asbestine or satiny gloss, and sharply cut off from the surrounding skin. They formed elongated streaks of half an inch to three inches in length, and were from one to four lines broad, and were all directed vertically or obliquely to the axis of the body. They were symmetrically arranged in both lower extremities below the trochanter major, above the patella, above the internal condyle of the femur, and across the outer side of the leg; altogether there were from twenty to thirty such streaks on each leg. The affected parts were sunk below the level of the surrounding skin; and when pressed the bluish color disappeared, and one could see the blood return into the subjacent dilated capillaries. The sensibility of the parts was diminished. Three months later, the appearances had somewhat faded, but were essentially the same. The second case resembled the last, but was not so well marked; it occurred in a young woman, aged twenty-eight. The one we ourselves observed occurred in a servant girl, aged twenty nine, who, after suffering from some severe abscesses, found that small white spots formed on the left side of the neck, extending from the sternum over the clavicle towards the spine—like zoster. The spots were sharply defined, very smooth, and bloodless; and looked as if the sub-epidermic tissue had been punched out. There had never been any elevation of the tissues or secretion. The outline was generally circular; or, where two or more spots had coalesced, the outline became oval. They varied in size from the point of a pin to a split pea. There was a small patch of similar white spots on the right hypochondrium. Her general health, at the time we saw her, was good.

Like Dr. Reuss, we failed at the time in meeting with anything analogous in works on skin diseases. In the fourth edition of Mr. Wilson's works "*On Diseases of the Skin*", (p. 378,) which has just appeared, the affection is described under the name of *Morphæa Alba*.—[*Vierordt's Archiv.* and *Med. Chir. Review*.]

Amylene, a condensed history of its discovery as an anæsthetic agent, with an account of the Experiments in the Hospitals of London, Paris, Strasbourg, and Brussels. Translated and abridged for the MONTHLY from the Revue de Thérapeutique.

Anæsthesia is a conquest which will endure notwithstanding the accidents which now and then occur to surgeons. But yesterday this method counted two agents, sulphuric ether, now seldom used, and chloroform, almost universally adopted. A third is now being tried.

On account of the deaths which have occurred during the use of inhalation in the hospitals of London, and which seem to have been more numerous there than elsewhere, the English physicians have eagerly sought for a substance less dangerous than chloroform, and one of them, Dr. Snow, has arrived at a result in the discovery of the anæsthetic properties of amylene which merits being recorded.

Dr. Snow after many experiments upon animals, after having respired the vapors of amylene himself, decided to employ it upon man. The 10th November, 1856, he employed it for the extraction of teeth in two young persons fourteen years of age. In these cases he was not perfectly successful, but from what he had observed he felt authorized in continuing his experiments, and so on the 4th of December he used it upon four new patients with complete success. The 13th of December it was again employed in some more severe cases; and in one, operated upon by Mr. Fergusson for fungus of the testicle, and in another, operated upon by Mr. Bowman for the removal of tumors in the region of the groin, and in two cases of section of tendons. The 27th of December, M. Snow used it in the case of a young girl three years and a half old. She breathed the vapors for two minutes only. She did not give the least manifestation of pain, and awoke at the very moment that the operator finished the section of the tendons of the muscles of the foot.

January 8d, Mr. Fergusson operated upon three patients subjected to the vapors of amylene. In one a rhinoplastic operation was to be completed. The inspiration continued six minutes. It was observed that the amylene produced less rigidity and less convulsions than chloroform administered a few days before.

January 7th, Mr. Henry Lee employed amylene upon a young girl whose thigh he was to amputate. The anæsthesia was maintained during the whole of the operation,—three ounces of amylene were employed. The young patient felt no pain and was very well afterwards. The same day Mr. Fergusson operated upon three patients under the anæsthetic effect of amylene. In all the anæsthesia was obtained in two or three minutes. In two the intelligence was not completely abolished.

Mr. Tyler Smith, surgeon to St. Mary's Hospital, has employed

amylene with success in accouchments. Upon the approach of each pain, he caused 30, 40, 50 drops of amylene poured upon a compress folded several times, to be inhaled. These inhalations constantly and rapidly determined a state of insensibility to the pain, the uterine contractions lost nothing in force or frequency. The return of sensibility was almost instantaneous, from the moment that the pain ceased, and the compress was removed. At the time of the birth of the infant the insensibility was as complete as if chloroform had been used. The placenta was detached and expelled with rapidity, and the uterus contracted well afterwards; the infant was healthy and vigorous.

Mr. Tyler Smith, as well as the other surgeons already mentioned, accord to amylene, compared with chloroform, the advantage of a prompt action *probably* without danger, and what is not less important, the rapid disappearance of the insensibility as soon as the inhalations are suspended. The *only* disadvantages are, the disagreeable odor of this substance, and the necessity of employing a great quantity in order to produce sufficient anæsthetic effects.

Up to the close of January, sixty-nine operations had been performed in England under the action of amylene.

In Paris amylene was first employed in the early part of February, at Hospital St. Antoine, in the wards under the charge of M. Aran, upon patients who had come to have some teeth extracted. Three young women were subjected to the vapors of amylene. The duration of the inhalation was twenty minutes for each of them without producing complete insensibility. The instrument M. Debout invented for chloroform was used, which did not permit the vapor of amylene to pass off in sufficient quantity in a given time. This and the limited quantity of amylene used was supposed to be the cause of the failure.

At a second sitting, the apparatus of M. Charriere for chloroform was used, and a larger quantity of amylene was secured. According to Mr. Snow, the patient should respire twenty grains of amylene a minute, which produces insensibility in three minutes, and sometimes less, which was the result in this case. From 3i to 3iiss of amylene was poured into Charriere's apparatus, and in less than three minutes the patient, a young female with a large decayed molar tooth, was fully asleep. Not being ready for the extraction of the tooth, the patient was allowed to awake, which she did in less than a minute,—her face was gay and laughing, she thought she had just returned from a walk. Everything prepared, about a drachm of the amylene was again poured into the apparatus, and the anæsthesia was again as prompt as before, the third minute had hardly elapsed when the mouth of the patient was opened without resistance and the tooth extracted without the patient manifesting the least sign of pain.

At the same time M. Geraudes, Surgeon to the Foundling Hospital, made some experiments. He had operated at the time of

his report (March 4th) upon twenty-five patients, children from three months to ten years old. In all, with a single exception, the anæsthesia was produced in a very short space of time, the minimum of which was one minute, and the maximum three. We cite two observations:

A little patient about six years old was submitted to the action of amylene, in order to examine more easily its eyes. The child breathed the vapors with evident repugnance, it showed no signs of suffocation, it had not that abundant salivation which is sometimes produced by chloroform, but a sudden and very marked weeping was produced, as when vapors of ammonia are respired. This infant reacted very slightly however, against the vapors of amylene; in a few moments, hardly a minute, it remained immovable, insensibility was obtained. The inspirations were suspended. From 3i to 3iss of amylene was employed. The infant awoke with the same rapidity, it did not complain, and willingly accepted food.

The second observation is the exception mentioned above. The patient was a girl four years old. The apparatus for inhalation fitted badly to the face, so that compresses were used. The child at first pushed away the hand of the operator, saying that it smelt badly. Soon, however, she became immovable, the weeping was as marked as in the case just cited. At the end of about two minutes she showed a rigidity and contraction of the limbs which is contrary to the assertion of Dr. Snow.

Soon, however, relaxation commenced, and in three minutes anæsthesia was obtained. Still, it was easy to see that the sleep did not resemble that produced by chloroform. It was evidently less profound; the child opened its eyes, made a few movements, and spoke as though dreaming, yet without showing any pain while the operation was going on. The pulse and respiration was as in the normal state. Amylene being volatile the whole of it was soon consumed, that is to say 3v in about eight minutes, before the operation was terminated. Recourse was had to chloroform, and it was soon easy to judge how much more rapid and active in action this substance is. In a few seconds the child was completely comatose, and appeared much more profoundly asleep than before. This sleep was prolonged several minutes after the operation was terminated, while the child woke up the minute she ceased to breathe the vapors of amylene. The operation continued twelve minutes. With this exception M. Giraldez observes that all the children respired the amylene without effort, without much resistance; in all the respiration was calm as normally; the anæsthesia was obtained without convulsion, without muscular contractions, without rigidity, without being accompanied or followed by nausea or vomiting, although the amylene was given soon after eating. In all the awakening was rapid, complete; they preserved their gaiety, were not incommoded, innervated, irritated, or disagreeable during the rest of the day.

As soon as the anæsthesia is complete M. Giraldes suspends the inhalations. The explorations and the operations requiring but little time, he has not thought proper to prolong the inhalations too long. He gives no opinion upon the probable duration of anæsthesia, yet he believes that amylenic anæsthesia can be long enough for performing the great operations of surgery.

M. Giraldes adds, in terminating, that the vapors of amylene, even when they have a marked odor, are respired without effort, without producing any efforts of cough, any convulsive movements of the larynx, nor those contractions of the jaws, those cephalic congestions which are sometimes observed after the inhalation of chloroform.

Experiments upon children and in the surgical clinique of M. Rigaud in the hospitals of Strasbourg, have led to the same results as those of M. Giraldes. In some observations of M. Rigaud, as well as in those of M. Giraldes, it is shown that the exhibition of amylene without an apparatus leads to a tardiness in the result.

Two cases of amylenation have been tried in Strasbourg in the obstetrical clinique of Professor Stoltz.

A woman twenty-six years old entered the clinique in labour. After a few hours, the neck being effaced, the orifice dilated, and the head passing the superior straight, she was submitted to the action of amylene. It was commenced at the moment when the head was engaged in the brim of the pelvis. Some amylene was poured into a bag closed with a compress and covered over exteriorly with oiled cloth. The woman gave a few cries and became stiff. After five minutes of inhalation a commencement of anæsthesia was observed. A contraction of the womb then took place, and the woman made a few complaints, but much less loud than is usual. At half-past one new application of amylene; in five minutes the woman lost consciousness, a contraction followed and excited a few moanings. At two o'clock the head was engaged during a third inhalation which also produced a beginning of loss of consciousness; the woman uttered a cry at the moment that the labour was finished.

Interrogated as to her sensations, she said she had experienced vertigo, ringing in the ears, a burning feeling in the pharynx. She recalled all that passed, but had felt no pain. The child is living and healthy. The uterine contractions were not affected by the amylene.

The second case was one of premature delivery. The amylene was given to lessen the pain of the last efforts of labour. No contraction of the uterus took place during the whole duration of amylenation; friction over that organ induced no expulsive effort; the womb hardened one moment to relax the next. The beatings of the foetal heart diminished to sixty pulsations. M. Stoltz decided to terminate the labor by the application of forceps. The woman did not feel the introduction of the instrument, nor the

tractions which were necessary. During amylenation she had vertigo, and experienced a dryness of the mouth. The infant was living, but feeble, half asphyxiated, not at full term.

M. Stoltz thinks that the amylene had probably nothing to do with the slowness of the uterine contractions, nor with the asphyxia of the infant. Other facts will relieve the doubts upon that point.

M. Tourdes resumes the results of his observations and experiments upon children as follows:

Children receive amylene without any repugnance. The odor of this substance neither irritates nor fatigues the air-passages. No apparatus is necessary for putting to sleep the little patients; a sponge in a cone of oiled-cloth opened at the bottom is sufficient.

The anæsthetic action is rapid; the resistance rarely surpasses one or two minutes.

The insensibility is complete without carrying it so far as to produce muscular resolution. It is much easier not to exceed the effects you wish with amylene than with chloroform, to limit yourself to a transient and superficial anæsthesia proportioned to the end to be attained.

With chloroform a greater action is produced than is desired, a profound anæsthesia is determined, a complete resolution of the limbs, whilst with amylene you are almost certain of not obtaining them unless you desire to do so by persistent inhalation.

If you desire a profound anæsthesia accompanied with muscular resolution, this result can be attained by means of amylene, by prolonging sufficiently its action. This is an important difference between this substance and chloroform. From the moment that the patient ceases to respire amylene, the effects of this agent diminish with rapidity. The absolute insolubility, and the excessive volatility of this body result in a rapid elimination and a prompt diminution of the symptoms.

With chloroform, on the contrary, of which the volatility is much less, the effects are more prolonged; sometimes they are increased after the inhalations have ceased.

The recovery is complete and rapid. From an anæsthesia of short duration, not surpassing eight or ten minutes, two or three minutes is all that is necessary for a child to regain all its faculties. A little longer time is required when the sleep has continued longer. The elimination is rapid and the traces of amylene are promptly effaced.

Finally, M. Tourdes designates as a great advantage of amylene over chloroform the absence, or at least the great infrequency, of nausea and vomitings.

M. Duroy, a pharmacist, presented to the Academy of Medicine of Paris, at its sitting of March 31, a memoir upon amylene, its purification and its characteristics. At a previous sitting of the 10th of March, M. Debout had read a paper upon the innocuous-

ness and the value of amylene considered as an anæsthetic agent. This latter paper gave rise to a commission composed of MM. Robert, Velpeau, and Malgaigne, who reported upon it at the sitting of the same body, May 12th last, through the chairman of the committee, M. Robert.

The paper of M. Debout repeats the statements already made by Mr. Snow, MM. Giraldes and Tourdes, that amylene produces anæsthesia very promptly without any painful sensation, without provoking any cough, or the necessity of spitting, as is often observed in the use of chloroform. During the whole of amylenation the pulse continues large, full, and very frequent, the respiratory movements ample, the skin warm, the face colored; in a word, there is absence of those symptoms which show that the new agent affects easily the phenomena of organic life. Without entirely substituting amylene for chloroform, this new anæsthetic, says M. Debout, should be inscribed among the useful medicinal agents. M. Robert, in preparing his report, used amylene forty-four times upon adults, male and female, and for various operations.

In these several experiments, M. Robert says he did not witness any symptoms of irritation about the mucous membrane of the mouth and bronchial tubes, exhibiting itself by salivation and cough. Generally, the patients became insensible in from one to three minutes, rarely after six or seven. Three became refractory and necessitated the use of chloroform after ten or twelve minutes of inhalation. The anæsthesia was produced without being preceded by the symptoms of agitation which chloroform frequently produces. The face was more or less red; the eyelids remained wide open; the eyes fixed, frequently turned up under the upper eyelid; the head was thrown back; sometimes the limbs were extended, becoming stiff. The pulse became frequent; in one case it became intermittent and thready. The respiration was free, and I never observed that spasmodic tightening of the jaws with threatened suffocation which chloroform sometimes provokes. It never produces muscular relaxation, and the insensibility it causes would last but a short time if the amylene in the apparatus was not renewed every five or six minutes. The operation concluded, the recovery is prompt, and the patients sustain no ill effects.

This succinct review of the effects produced by amylene proves that this body possesses with ether and chloroform the power of preventing pain, but that it differs from them, especially from chloroform, by the instantaneousness of its action, which ceases the moment inhalations are suspended, and in the fact that it has no effect upon the muscular contractility.

M. Robert reports upon the perfect harmlessness of amylene, by citing the fatal case which singularly enough occurred to the discoverer of the anæsthetic property of amylene—to Mr. Snow him-

self. This disaster occurred April 7th, to a patient upon whom Mr. Fergusson was to operate for fistula of the anus, Mr. Snow being invited to aid in the operation, and administer the anæsthetic. The quantity used was quite small, and at the end of two minutes loss of consciousness was produced. The operation was performed, the inhalation was suspended, but recovery not taking place immediately, the pulse was examined, was absent upon the left side, and very feeble upon the right, and soon disappeared altogether. Respiration soon ceased, when artificial respiration was continued according to Marshall Hall's plan, and insufflation from mouth to mouth, but without success. The autopsy revealed no cause of sudden death, so that Dr. Snow was forced to attribute it to the action of amylene. This patient was the one hundred and forty-fourth to whom he had administered amylene.

The next question taken up by the commission is, whether it offers less danger than ether or chloroform. Various comparative experiments were undertaken by M. Debout to resolve this question, and which were repeated by M. Robert. The first writer says, if it is necessary to double the quantity of chloroform to convert the anæsthetic dose into a poisonous one, it is necessary to quadruple that of ether and quintuple that of amylene. M. Robert in his experiments on animals found that they became as it were accustomed to the use of amylene, and recovered even a part of the sensibility. The reporter agrees with M. Debout in considering it poisonous but much less active than chloroform, but he differs from him in drawing the conclusion that consequently it is much less dangerous in practice. An important fact, he says, in the history of anæsthesia is, that it is not from the successive and progressive evolution of the phenomena of intoxication that death occurs in man, but in a sudden and unexpected manner, as though in consequence of a predisposition in the organism, the nature of which is unknown. I have shown this to be the case with chloroform, in a work published several years since, and the case of Mr. Snow proves it to be the same with amylene. The danger lies in anæsthesia, which, according to the expression of M. Tourdes, is a *diminution of life, and a step taken towards death*. Notwithstanding the fact that it is not harmless, it should be retained in practice because its action is prompt, of short duration, and its effects rapidly pass away without leaving behind that general *malaise* which occasionally persists for a long time after the use of chloroform. It is preferable to the other anæsthetic substances for very short operations, when one intends only to annihilate the pains, or simply to blunt it. It is peculiarly applicable for children and patients affected with disease of the air-passages. It should be rejected for long and painful operations, and especially for those in which it is necessary to overcome the contraction of muscles as in luxations and hernias.

M. Robert's report closes by proposing a vote of thanks to M.

Debout, and that his memoir should be published in the Archives of the Academy.

M. Velpeau, as soon as the reading of the report was finished, arose and said:

"Though I am a member of the committee which had to judge M. Robert's work, and though I have signed the report which has just been read to you, I declare I am not a great admirer of amylenene. I have several times tried it at my service at the Charité, and sincerely believe that the successor of chloroform has not yet been found, and that it is, in my opinion, still the best of all anæsthetic substances. I find fault with amylenene for its detestable smell, as inconvenient for the assistants as for the patient, the little certainty and constancy of its action, the two short continuance of its effect; and the necessity in using it to employ a special inhaler. Finally, the accident which happened to Dr. Snow, and related by M. Robert, destroys the hopes which had been founded on its innocuousness. As to chloroform, I do not say it is quite innocuous, but I believe the dangers of its use have been very much magnified. I will even willingly say it has been calumniated. For the last ten years I have used chloroform about five or six thousand times for different operations, and on patients of different age and sex; never have I had to lament any accident. I am not the only one in this case amongst the surgeons of Paris. I do not know that any misfortune caused by chloroform has ever happened in all our large hospitals; besides, when death occurs during or after a surgical operation, is it just in all cases to accuse the anæsthetic agent? M. Robert has, I believe, lost a patient with an amputation of the thigh, to whom he had given chloroform. This last substance has been accused. I am not sure whether it was right. I think this anæsthetic substance is not more dangerous than amylenene if it is used with proper precaution. It has the advantage over its rival of not disseminating a disagreeable odor; of being easily manageable, without the need of a special inhaler. It is quite sufficient to pour some drachms of the liquid on a sponge; its action is generally pretty quick, and always lasting; besides, the inhalation can be prolonged without inconvenience, the degree of anæsthesia shows the quantity which it is necessary to employ. The awakening which succeeds to the effects of chloroform is generally pretty quick.

"I sum up by saying that amylenene can be introduced into practice, but that it does not deserve to be substituted for chloroform, which still remains the most powerful and most certain of anæsthetic agents."

M. Robert then said: The advantages of amylenene consist in the rapidity and the short duration of its action; on this account it is proper in slight operations which are very painful. I would call the attention of M. Velpeau to this fact, that we use chloroform now only in serious cases, when it is necessary to continue insen-

sibility for some time. It sometimes happens with chloroform that the insensibility is preceded with a certain agitation, which is manifested by a cough, desire to vomit; the next day there is often gastric embarrassment; and still more, the insensibility produced is of long duration. Chloroform is indispensable when it is necessary to obtain muscular relaxation; but notwithstanding its disagreeable odor, to which one becomes easily accustomed (I speak from experience), amylene has its advantages. Its greatest inconvenience is, to require a special apparatus. Amylene puts to sleep in an instant. For instance, this morning a man came to my consultation with a narrow preputial opening. I operated upon him after having subjected him to the inhalation of amylene; in less than a minute he was asleep, and as soon as the operation was performed he took his hat and left. I do not believe that amylene has any special prerogative of harmlessness, but there are cases where this agent should be preferred to chloroform in operations of short duration, for example, the incisions, opening of abscesses, etc. Without desiring to depreciate chloroform, I think that it is well to leave a little place beside it for amylene.

[*Amer. Med. Monthly.*

On the Pathology of Mellituria. By DR. GARROD, Physician to University College Hospital.

"As to diabetes being dependent, not upon any increased formation of saccharine matter, but on an imperfect destructive power existing in the blood, although most of the phenomena are explainable on this hypothesis, still it is by no means satisfactory, as at present there is no proof of this absence of power to effect the ulterior changes. And certain facts, besides those which I have already brought forward, appear to militate against the existence of this deficiency; for there is no marked difference in temperature between diabetic and other subjects; and, in certain experiments made some years since by Professor Graham, no peculiarity was discovered in the amount of carbonic acid which they expire. Upon the whole, I should be disposed, at present, to regard diabetes as due, in the first place, to an increased formation of sugar by the liver, produced by some alteration of function in the organ; and at the same time that its glycogenic power becomes abnormally increased, I should consider that it loses the property, which exists in health, of arresting and changing into new principles (as fatty substance, &c.) those saccharine matters which are brought to it by means of the portal blood. If we view diabetes in this light, we shall, I believe, be able to explain all the phenomena which the disease presents; at the same time I am aware of no facts which can be brought forward in opposition to it. It explains, for example, why sugar can generally be detected in the

urine of diabetic patients, when subjected to the most rigorous animal diet, and, at the same time, why amylaceous matters usually so greatly augment this saccharine impregnation."—[*British Med. Jour.* and *Ranking's Abstract*.]

On a new Mode of Treatment in Saccharine Diabetes. By M. PIORRY.

M. Piorry is of opinion that sugar is indispensable to the maintenance of life (he founds this opinion upon the researches of MM. Dumas and Cl. Bernard), and on this account he thinks that diabetic patients ought to be supplied with sugar, and substances which are transformable into sugar, in order that they may repair that unnatural waste which is consequent upon their malady. With this view, he has brought the following case before the French Academy of Medicine:

CASE.—The patient is only described as being under M. Piorry's care in La Charité (No. 19 Salle St. Anne), and as suffering from diabetes, with very copious secretion of sugar. All the viscera were sound, with the exception of some slight hypertrophy in the spleen. From the 2d to the 12th of January, ten litres of urine were passed daily. During this time, certain feverish symptoms, which came on in the evening, subsided under the influence of quinine. On the 12th, the patient was directed to abstain as much as possible from all fluids, and to have a daily double quantity of meat, *with 125 grammes of sugar-candy*. This treatment was persevered in on the following days, and the result was that the quantity of urine fell to two and a half litres in the day—the specific gravity remaining the same, namely 1.060. On the 2d of January, 500 grammes of sugar had been lost in the twenty-four hours; from the 12th to the 24th, notwithstanding the addition of the sugar-candy, the daily loss of sugar was not more than 135 grammes.

This case was referred to a commission, consisting of MM. Andral, Rayer, and Cl. Bernard; and in the meantime it is only baldly stated, as we have given it.—*Gaz. Hébdom. de Méd. et Chir.* and *Ibid*.

Good Effects of Guaiacum in Cynanche Tonsillaris.

Dr. BRINTON has been treating several cases of cynanche tonsillaris at the Royal Free Hospital, on what he informs us has been his usual plan for many years—a plan so simple and so efficacious as to deserve mention. He regards the tonsils as an offshoot of the intestinal canal, and considers that not only is constipation, in most cases an element of the malady, but that, on the above view, the inflamed structures are best relieved by free purging, and perpetual gargling and fomentations with hot water. For the first of these indications he relies chiefly on powdered guaiacum, which

he gives in large (one scruple to one drachm) doses, every four hours: often in combination with opium, aloes, and jalap, and suspended in mucilage. He finds that, if commenced tolerably early, this treatment generally averts all abscess, and even later, rapidly removes the malady, while it allows of a rapid recovery, very unlike the long convalescence which often follows bleeding, blisters, and tartar emetic.—[*Lancet*.

The Medical Treatment of Insanity. By M. H. RANNEY, M.D., Resident Physician of the New York City Lunatic Asylum, Blackwell's Island. (Read before the Association of Medical Superintendents of American Institutions for the Insane, May, 1857.)

In presenting my views relative to the medical treatment of insanity, I shall be very brief, tracing only the general outlines of the course pursued by me in a few of the best marked forms of this disease.

The object of the report is to obtain an expression of the views of the different members of the Association on this subject, to attain which it is necessary that there be no misunderstanding as to the particular disease described. The treatment of insanity is the great desideratum, although in fact subjects of secondary importance are much more frequently discussed. The peculiar ideas entertained by the members as to ventilation, the construction of water-closets, &c., are generally understood; but I am unable to say that there is an unanimity of opinion as to a mode of practice in any one of the various forms of insanity. It may be, perhaps, impossible to determine the exact treatment which should be pursued in a particular case, but the general principles, at least, that govern our course in a certain defined form of mental derangement, can be given as well as in the treatment of physical diseases generally. I assume that there are conventional terms, which convey to the mind definite ideas of certain forms of diseases which, when referred to, suggest a group of associated symptoms that, taken collectively, constitute a distinct variety. It is only to a few of such well-known and recognized forms that reference will be made.

In insanity no new faculties are created, but those already existing are modified by the conditions of exaltation, depression, or perversion. The type of the different varieties of disease may be found in the normal state of the mind. This consideration affords important aid in distinguishing one form of mental disease from another.

I shall first refer to Acute Mania. The physiological type of this disease is given more nearly in anger marked by violence than in any other state of mind. The leading characteristics are,

impassioned moral and intellectual exaltation (the one exhibited by perversion, the other by delusion), the rapid flow of ideas, violent gesticulation, disposition to overthrow or destroy the furniture of the room, sleeplessness, and wild expression of the eye and countenance, betraying great disquiet of mind. Undoubtedly the term acute mania recalls a certain grouping of symptoms, and conveys more accurate notions of the condition than would the minute description of an individual case, since by abstraction the essentials in particular instances have been selected and combined to form the general idea. Taking it as granted that the form referred to is fully recognized, the medical treatment will be briefly considered. A careful examination must be made into the general condition of the system, as well as of the functional disturbance of any organ that might affect the brain. The success following treatment depends much upon the care exercised in the duty. The patient should, as far as possible, be excluded from all excitement. In most cases the condition of the stomach and bowels is disordered, to correct which an active cathartic should be prescribed. For this purpose the combination, hydrarg. sub. mur. gr. x. pulv. jalap gr. xx. may be administered, and if the patient be of full habit a grain of tartarized antimony may be added. The skin is often dry and unclean requiring, after catharsis, a warm bath, and pulv. ipecac. c. gr. x, the following night. On the succeeding day, if the patient be plethoric and there seem to be a determination of blood to the brain, commence with ant. et potass. tart., gr. ss. *ter in die*, which should be gradually increased until nausea follows; cold applications may be made to the head, and spts. ammon. acetat., or spts. æth. nit. to act upon the secretions. If there be unnatural rapidity in the pulsations of the heart still persisting, tinct. verat. virid. gtt. v, ad x, *bis in die*, may be substituted for the tartar emetic. If for several days the patient continue violent, ol. tigllii. is to be applied to the back of the neck and behind the ears; selecting for this a proper time in the advance of the disease, a full eruption is usually followed by marked improvement. As soon as the prominent symptoms of violence yield, morph. sulph., gr. ss. *ter in die*, is substituted for the remedies before specified, or if, at the time of admission, the patient be emaciated and apparently prostrated, either morphia or opium is given directly after the warm bath. Under these circumstances a full diet is urged, and if with restlessness and high excitement an anæmic state of the brain is believed to exist, a supply of meat rich in fat is liberally furnished. Beer and milk-punch take the place of other drinks. Tonics, such as ferri carb., potass. iodid., &c., have a favorable action, and even quinine is occasionally admissible. When violent paroxysms are separated by lucid intervals, as in recurrent mania, quinine, in doses three times a day during the quiet period, has been found highly beneficial.

My attention was first called to the use of this article by a paper

read before this Association three years ago, by Dr. Tyler. Since then I have often used quinine in cases of the recurrent form of insanity with decided success. In many the lucid interval was prolonged, the paroxysm less severe, and in a few instances complete recovery was the result. If masturbation was suspected as a cause, free applications of croton oil were made to the penis and scrotum.

Amenorrhœa is a frequent cause of mania in girls between the ages of 15 and 25, while in later life menstrual disturbances usually produce melancholia. Mania from this source yields readily to proper treatment. The tr. al. et myrrh. to remove constipation, Lugol's solution, or some other form of iodine, with stimulating applications to the mammæ, effect, ordinarily, a cure in two or three months. In that form of mania in which little violence exists—the patient seeming like one inebriated, yet moved by that same mischievous propensity that is found in a variety of nymphomania, opium in large doses controls quite effectually the undue exhilaration of spirits. The common course is to commence with tinct. opii. 1 dr. *ter in die*, which is doubled at the expiration of the first, or even increased to three drachms, if found necessary, at the end of the second week. From the peculiar state of the brain and nervous system, these large doses are not only tolerated, but produce little sensible effect aside from allaying the excitement and occasioning active emesis and catharsis. These last conditions render it often necessary to omit the medicine for a day.

Melancholia, the lypemania of Esquirol, is another form of mental disease readily recognized. The elementary type is found in fear, sorrow, or grief, as exhibited by a mother in the loss of her child, or in impending calamity. The peculiar marks which distinguish this affection are exaltation of the sentiment of sorrow, entire concentration of mind in one idea or class of ideas, and an inability to direct the attention to anything not immediately connected with that which wholly absorbs the mind. It is frequently dependent on some bilious or uterine derangement, and in the selection of medicines attention should be directed particularly to this fact. To correct the secretions mass. hydrarg., or the hydrarg. cum cretâ, may be used. Where a sufficient alterative effect has been produced, opiates in small doses are indicated. The object is to partially remove the intense grief or fear which characterizes this form of disease. Morphia in small doses may for a long time be continued. During its administration gentle laxatives will be required; for, aside from the effect of the opiate, there is a tendency to constipation. The patient generally refuses a proper amount of nourishment, leaving the vital powers greatly reduced, and requiring tonics and stimulants—such as ferri carb., porter, &c. If a propensity to commit suicide exist, the occasional application of blisters, or ung. antimon. to the back of the neck, lessens much the danger of such an occurrence. It may afford benefit, in

part, by relieving congestion of the vessels of the brain, but principally from the substitution of a real for an imaginary trouble.

Of the remaining forms of insanity Dementia alone is that which I now shall consider. Its fundamental type or analogue exists in natural dullness of intellect. The leading characteristic is an enfeeblement of the intellectual faculties, or even a complete obliteration of their manifestations. Dementia is usually a sequel of mania or some acute affection of the brain; rarely an idiopathic disease. Moral treatment is of much more importance than in mania or melancholia, yet a judicious use of medicines will aid much in the restoration of reason. To relieve anæmia, nutritious diet and the free use of chalybeates are requisite. The object is to supply the brain its proper stimulus by enriching the blood, and thus arousing its dormant excitability. As the muscle loses its contractile power from long inaction, so may the brain, although unchanged in structure, cease to perform its proper functions, from previous long-continued disease. The phosphates of iron and manganese become valuable in this disease by furnishing the necessary amount of phosphorus for generating the nervous force. In a few instances rapid improvement has followed the use of *cannabis indica*, which seems to have a special tendency to stimulate the senses, and excite the moral qualities. Those cases in which dullness of intellect depends on a congestive condition of the brain are benefited by counter irritants, such as blisters, ung. antimon., or ol. tigllii applied to the back of the neck. The most favorable results occasionally follow accidental sloughing from the application of tartarized antimony, while the same effect may occur from an extensive abscess.

Such are my views in regard to the ordinary course to be pursued in treating the foregoing forms of insanity, each individual case requiring, however, modifications of treatment corresponding to the particular causes, age, sex, temperament, condition of system, &c. Adopting the somatic theory as to the proximate cause of insanity, that the material part, the brain, is the seat of disorder, while the immaterial is not subject to change, there can be no reason why medicines should not exert a controlling influence over this disease. Not only is the physical organization directly affected by medicinal agents, but over the mind itself the manifestation of the immaterial through the medium of the brain is subjected to their restoring influence. Narcotics, especially, seem to act immediately on the brain, producing a marked physical effect. Some excite the senses, others produce in the intellect the most brilliant images, and a few exert their influence over the moral faculties. The first effect of opium is to allay the passions, not only by lessening directly the most violent anger and poignant grief, but also by occupying the attention with fanciful and pleasant imagery, tending to induce cheerfulness and contentment. *Hyoscyamus*, on the contrary, is supposed to arouse anger and

jealousy, while belladonna, in large doses, occasions gloomy thoughts and dejection of mind. Stramonium affects the senses primarily, and, in moderate quantities, disposes to convulsive meriment. From the use of cannabis the activity of the senses is increased, and the most surprising delusions follow, which may continue long after the immediate stimulus has passed away. The effects of narcotics are not fully understood, but sufficient is known of them to call for a careful discrimination in their use. It is well settled that they act on the mind, and that each has some peculiar characteristic distinguishing its action. If this be granted, it necessarily follows that with a knowledge of the change produced by this class of remedies on the different faculties of the mind, a prior selection for the individual case must be attended with good results.

In thus presenting my views it must not be understood that I advocate entire reliance on medicinal agents in the treatment of insanity. The adoption of proper hygienic rules is essential, as in physical disease generally. Moral treatment, including employment, amusements, the establishment of regular habits, &c., is also a most important auxiliary to recovery. This is particularly true where derangement of mind has existed for years. But while admitting the importance of moral treatment, I would avoid an over estimate of its mechanical part, and carefully investigate not only the laws of physical action, but the influences of medicine on the manifestations of mind, that our noble profession may not become simply an art.—[*Amer. Jour. of Insanity.*]

Vesico-Vaginal Fistula.

We condense from the *American Journal of the Medical Sciences* the following:—In a case of this terrible accident, Dr. James H. Sawyer thus describes the mode of procedure which he calls the plan of Mr. Maurice Collis.

The patient was a young woman, 24 years of age, injured in her first labor. The labor was greatly protracted, and the perforator was used in embryotomy. Incontinence of urine declared itself on the fifth day after the operation; but as the patient's health was much impaired, she was advised to seek vigor by change of air in the country, after her confinement. On her re-admission, it was found that the narrowed condition of the vagina made it necessary to dilate it with sponge tents.

"After trying different positions, I found the lithotomy posture the most convenient, and accordingly, on the 25th, having previously cleared out the bowels, and secured the hands and feet, I

proceeded to the operation. It was intended to operate under chloroform, but after a few inspirations, the sudden irregularity of the heart's action compelled us to desist.

"Two dilators were passed, and pressed obliquely upwards and outwards; then the third, pressing down on the recto-vaginal septum, enabled me to get a view of the fistula. A full-sized catheter passed through the urethra, and pressed downwards and forwards, kept firm the posterior margin, and prevented the bladder from coming in contact with the knife. With Baker Brown's knife I carefully split the vesico-vaginal septum at the posterior lip to the extent of three lines, carrying the knife carefully around the commissure, and keeping close to the vesical surface. I then did the same to the lower and anterior lip, but with greater difficulty, as its aspect was turned from me. The constant welling of blood and urine compelled me to work very slowly. I then syringed with cold water, which in some degree repressed the bleeding; and with the same needles used by Mr. Collis I introduced four ligatures of ordinary housewife-thread at intervals of three lines, carefully avoiding penetrating the vesical mucous surface. I secured the ligatures over two bars of gutta percha, instead of gum elastic, as used by Mr. C., as it is not corroded by the vaginal secretion. I was most cautious not to draw the threads too tight, and thus prevented strangulation of the lips embraced between the bars. The operation lasted about half an hour. She was then placed in bed on her face, her body well supported by pillows. A long gum-elastic catheter was passed and secured, and one grain of opium was directed to be given every third hour. On the fourth day I examined, and was gratified to find the margins of the wound in perfect apposition, and no suppuration. I cut the ligatures, but did not remove them until the following day, that is, the fifth from the operation. The union was complete, but I did not venture to withdraw the catheter or act on the bowels until the eighth, when the following mixture was directed:—*Olei ricini* 3vj; *tincture rhei* 3iij; *confect. amygd.* 3iv; *aquæ cinnamomi* ad 3vi.—*st.* 3i. 2dis horis. This acted gently. On the eighteenth day she was walking about, able to retain the urine, and her only annoyance was a tendency to pass water frequently. This gradually subsided, and on the 14th August she was discharged in perfect health, and is at present in a good situation, and, as she declares, as well as ever she was in all her life."

Dr. Sawyer claims for Mr. Collis's plan the following advantages:—

"First—Facility of execution. Secondly—Probability of speedy union by the first intention. Thirdly—The prominence of the vesical flaps forming an admirable barrier to the urine insinuating itself. Fourthly—Comparative freedom from hemorrhage. And lastly—If it does not succeed, there will be no increase of the fistulous aperture, as after other plans."—[*Dublin Hospital Gas.*

In reading the above case, we are filled with surprise that the propriety of Bozeman's Button Suture did not suggest itself to any one of the gentlemen mentioned in the article from which we extract it. We regard his operation as preferable to any other, beyond all comparison, and Dr. Sawyer must either have been ignorant of it—or did not understand it, that he would use any other. We see no force whatever in the advantages he claims for what he calls "Collis's plan," over Bozeman's. The difficulty of splitting the edges of the fistula must have been extreme, and in most cases will be found impracticable, while the plan of denuding the vaginal mucous surface, proposed by Drs. Sims and Bozeman, is comparatively easy. In conclusion we will say, that we wish to hear of no other plan than those of Bozeman and Sims—they have solved the difficulty, and, so far as we can see, their operations are the *ne plus ultra* in this department of Surgery.

Therapeutic Employment of the Pyrophosphate of Iron.

We condense from the *American Journal of the Medical Sciences*, the following account of a new and valuable preparation of Iron:—

M. E. Bobiquet read (Feb. 10th, 1857) an interesting memoir on this subject before the Imperial Academy of Medicine of France.

"Industry has already derived great advantage from the property possessed by pyrophosphoric acid of combining with soda, and with gold or silver. In medicine, the pyrophosphate of iron has often been tried, and this might be expected, for oxide of iron undoubtedly reacts on the functions of the blood, and the elements of pyrophosphoric acid are found in the bones; but it has soon been given up on account of its liability to change, and of the great quantity of pyrophosphate of soda necessary to retain it in solution in water. It struck me that these inconveniences might be easily avoided without depriving the ferruginous salt of any of its essential properties.

"In medicine the essential characters of a good preparation of iron are, that it shall readily dissolve in the fluids of the stomach without impairing their digestive functions, that it shall be completely assimilated in the system, and that it shall not act as an astringent. The pyrophosphate of iron possesses all these properties; its resistance to solvents is the sole difficulty which remains to be overcome to entitle it to the first rank among the preparations of iron.

"The solution of pyrophosphate of iron in a citro-ammoniacal liquor keeps for whole months without undergoing any change,

and yields to a syrup free from the intolerable taste of ferruginous compounds. Potash, ammonia, and the alkaline carbonates, do not give, with pyrophosphate of iron so dissolved, the reaction peculiar to the salts of iron.

"The process of solution being once found, nothing is easier than to transform the pyrophosphate of iron into comfits, syrup, or lozenges; the latent state in which it exists in this new salt enables us to mix it with wine of bark, and to obtain from it a powerful tonic, without having to fear the blackish discoloration and inky taste which are always produced when a salt of iron is brought into contact with fluids more or less highly charged with tannin.

"In whatever mode the citro-ammoniacal pyrophosphate of iron be administered, it has absolutely no taste, and patients not only bear it readily, but feel the best effects from its use. I have seen it particularly useful in well marked cases of anæmia, chlorosis, and chronic urethritis.

"To recapitulate, the pyrophosphate of iron, chemically considered, is polymorphous salt, in which the metallic atom is concealed from reagents; it contains, by weight, 21.11 per cent. of iron. In a therapeutic point of view, the facility with which it is assimilated by the system, the absence of all styptic taste, its perfect solubility in water, the influences, finally, which it exercises on the composition of the bones and the functions of the blood, entitle it to the first rank among ferruginous compounds.

"**FORMULÆ.** *Syrup of Iron.*—Pyrophosphate of iron, two and a half drachms; simple syrup, twenty-nine ounces; syrup of orange flowers, three ounces: make a syrup by simple solution, and color with a sufficient quantity of tincture of cochineal or alkanet. Each drachm of the syrup contains about six-tenths of a grain, and a tablespoonful, about three grains, of the salt of iron.

"*Ferruginous Comfits.*—Pyrophosphate of iron, one ounce and five drachms; divide into 500 comfits, each of which shall contain a grain and a half of the salt.

"*Ferruginous Wine of Bark.*—Pyrophosphate of iron, two and a half drachms; extract of pale bark, seventy-seven grains; white wine, thirty two ounces; to be made *secundum artem*."—[*Jour. des Connaissances Méd. et Pharm.*

On the Use of Sulphate of Atropia in Diseases of the Eye. By Dr. FRIEDRICH MOSLER.

As the result of practical investigations upon the use of sulphate of atropia in ophthalmic medicine, Dr. Mosler arrives at the following conclusions:—1. That the sulphate of atropia is preferable to the pure alkaloid for therapeutic purposes. In a state of purity the sulphate, employed with the necessary precautions, even in large doses (such as five grammes to an ounce of distilled water), produced no unfavorable effects upon the eye. In using it, care

must be taken of the absorption of the tears running from the eye and mixing with the solution, and the absorption of the solution itself is to be guarded against. 2. In ophthalmoscopic investigations, atropia has rendered especial services in many cases; in order to diminish as much as possible the inconvenience felt by the patient in its use, attention must be paid to the investigations of Donders, upon the more or less enduring operation of the different strong solutions. The employment of atropia is not *a priori* to be recommended in every ophthalmoscopic investigation. 3. In inflammatory states of the eye, especially those characterized by violent pain, intolerance of light, and abundant lachrymation, as particularly in injuries of the eye, with or without affection of the iris, we have been acquainted with atropia as an essentially soothing agent, as by its operation on the sensitive nerves of the eye it possesses the power of removing rapidly the state of excessive irritation. As a decided remedial agent, it appears moreover to act by its operation upon the motor nerves in the eye, inasmuch as, according to the explanations of Dr. Von Grafe, it paralyzes the muscles which are found in and about the eye, and which in such cases exercise an excessive pressure upon the internal structures of the eye, and in consequence of a return of the blood being impeded, give rise to accumulation of blood in those structures. It is thus explained why abscesses of the cornea under its use are less perforating and more easily healed, and why hypopyon is more rapidly absorbed. 4. Astringent eye-waters, especially the stronger cauterizing fluids, are better borne, and are attended with more rapid success, when the excessively heightened sensibility of the eye, which exists in the cases where this remedy is applicable, has been previously deadened by atropia. 5. Cauterization of the eye, employed only once daily with all necessary precautions, is better borne in many cases than the more frequent instillation of eye-waters, which every time appear to induce a new and well-marked irritation.—[*Archiv des Vereins für Gemeinschaftliche Arbeiten*, 1856, and *British and Foreign Med. Chir. Rev.*]

Method of Promptly Relieving Dental and Facial Neuralgias. By
MICHAEL ANDRE.

This method consists in turning into the meatus auditorius from four to ten drops (according to the age and sensibility of the patient) of the following fluid; then to close the opening of the ear by means of a little cotton, and to cause the patient to hold the head inclined for some minutes to the side opposite to the seat of the pain, so that the liquid may remain in the bottom of the ear. This preparation is thus made: *R.* Take of the extract of opium, of belladonna, and of stramonium, each *one part*; of distilled cherry laurel water, *twelve parts*. Dissolve and filter.

Although this preparation may be only extemporaneous, it may

nevertheless be preserved if care is taken to keep it cool, and to pour on its surface from two to four drops of sweet almond oil.

It is very rare that with the use of this liquid relief is not obtained in a few minutes; indeed, the patient is almost always asleep in half an hour, whatever may have been the severity of the pains, and that without having been in the least danger.

Absorption takes place almost as rapidly as from a denuded surface, and it is therefore unnecessary to blister the patient when we wish to use narcotics, since they act almost as rapidly by the auditory passage.

If it should happen that, at the end of eight or ten minutes, the pain does not yield to the remedy (which sometimes happens when the quantity used has been too small, or when we have to treat a neuralgia which has already required the use of narcotics in any way), it is necessary then to use a second dose, at least equal to the first, but in the opposite ear, in order to obtain promptly that relief which is only too frequently momentary in facial neuralgias of long standing.

The preference which I give to this aqueous solution over those which contain alcohol, such as laudanum and other narcotic tinctures, arises from having used both upon myself for several years for a facial neuralgia, and observing that the latter produce a sensation of quite acute pain at the moment of their use, and not being always as successful as the former, which causes neither heat nor smarting, and is more certain in its effects.—[*Revue de Thérapeutique*, and *American Med. Monthly*.

EDITORIAL AND MISCELLANEOUS.

VALEMIANATE OF AMMONIA AS A REMEDY FOR NEURALGIA.—It will be recollected that in the first number of our present volume we published an article, from the Montreal Medical Chronicle, reporting very remarkable success, by Dr. Declat, in the treatment of Neuralgia with the above named medicine. We have seen as yet no report of cases in our American exchanges—but have received many private letters asking how the article should be administered, and what is the dose? Having had recently under our treatment two obstinate cases of temporal and facial Neuralgia, and having failed to afford relief by any of the ordinary means; revulsives, tonics, quinine, and even opium failing to abate the pain, we referred to the report of Dr. Declat, with the view of resorting to this new remedy. It was now that we were able to appreciate the embarrassment of our correspondents about the dose. The cases in Dr. D.'s paper are carefully reported, apparently, but the dose certainly very indefinitely stated.

"A teaspoonful taken in the evening modified the pain at night and rendered it bearable. Two teaspoonfuls next day gave complete relief."

Now this "teaspoonful" we *suppose* was a solution, but of what strength!—Was the original preparation used by Dr. Declat in fluid form, or was it, as we now receive it from the chemists, in the form of a *salt*.—No definite dose is given, and hence the embarrassment in its administration. Wishing to try the efficacy of the article, we made a solution at first, of 10 grains to the ounce of water. Of this, we directed our patient to take one teaspoonful three times a-day, till the two ounce solution was exhausted. At the end of the second day, he increased the dose $1\frac{1}{2}$ teaspoonful, and reported a slight amelioration in his sufferings.

On preparing for this patient a second vial, we dissolved 32 grains of the Salt of Valerianate of Ammonia in two ounces of water, (two grains to the drachm,) directing the dose as before, viz. $1\frac{1}{2}$ teaspoonful three times a-day. When this was exhausted, we prepared a solution which contained 3 grains to each drachm of water, still advising the above doses.

CASE 2nd.—This was a negro woman, who had suffered from severe neuralgic pains in the temporal and occipital regions for six weeks. Quinine and other remedies failing, we administered the valerianate of ammonia in doses of 4 grains to the teaspoonful of water, three times a-day. On the second day the pains were much abated, and under the continued administration of the remedy, in similar doses, the distressing symptom has disappeared.

Valerianate of Ammonia, as we have seen it, presents the characters of a dirty-looking deliquescent salt, emitting a strong odor of valerian, and we may add, for the information of our readers, *costing* four dollars an ounce.

In relation to our success with this remedy in the above cases, we have to report that it has been very satisfactory, but at the same time we must say we would have been greatly disappointed did we not measure our credulity in this remedy by the good, old, *safe* rule "of believing just about one half of what we hear" in relation to the effect of remedies.

When we read Dr. Declat's article, the case of "Madame the Marchioness of Fontanelle, who had been attacked six years ago with facial neuralgia of the most severe description," and had passed through the hands of Legrand, Jobert (de Lamballe), Sedillot and Velpeau, besides a residence at mineral springs, and the best alterative and tonic treatment, unrelieved, and "when the agony was unendurable and the patient in despair," relief came suddenly, from three teaspoonfuls of a new remedy, we must confess, that we measured our belief rather, by what would *satisfy* us than by what we saw written in the report. If the relief was *half* as prompt in all cases, even with double the amount of medicine, we would be satisfied.

In making the above remarks, we would have it fully understood that we do not wish to doubt, in the least, the *correctness* of the *statement* of the reporter; far from that—we give full credence to the report, so far as relates to the two cases mentioned there; but two cases were too small a

number to judge of the *general* efficacy of a specific remedy, the effect might be attributable to accident or coincidence, a *post hoc* merely and not a *propter hoc*; so, in the end, we were not disappointed much, when our patient was only *partially relieved* after taking the remedy for about *ten days*. Our conclusion in relation to the remedy, after this partial trial, is, that it is a very useful article in the treatment of this form of neuralgia, so far as can be determined by the observation of these two cases and the testimony of the original favorable report of it: and we can further say, to those who wish to administer it, that our own careful experimental administration of it, gradually increasing the dose, proves that in doses of *four grains of the salt to the teaspoonful of water*, the remedy has no *injurious* effect upon the system, but its effects have been highly satisfactory. Whether or not we have yet reached the *full* dose used by Dr. Declat, we cannot say; that must be determined either by farther experiment or by a more definite statement from that distinguished gentleman himself.

Fracture of the Clavicle.—"I believe, that were surgeons to cease inventing apparatus for broken clavicles, and return to the simple method recommended by Hippocrates, and adopted by both Celsus and Dupuytren, viz., to lay the patient horizontally upon his back, they would save both themselves and their patients much trouble, and obtain much more satisfactory results. Such, at least, has been my own experience of late: and I observe that it corresponds with the experience of Drs. Eastman, of Broome Co., N. Y.; Eve, of Nashville, Tenn.; Buck and Post, of New York.

"Buffalo, June 20th, 1857.

FRANK H. HAMILTON."

"BREAK A LEG!"—The mention of Professor Paul F. Eve's name in the above connection, whose case was one of Fractured Clavicle, complicated with an injury of the arm, and which recovered without treatment, further than the quiet necessary to cure the arm, induces us to relate briefly a case of our own, which occurred a few months ago.

E—, a young man, aged about 25 years, received injuries which caused a fracture of the clavicle, and a fracture of the leg, just above the ankle. He also had a serious stab-wound in the face. These injuries required, of course, his strict confinement to bed for a considerable length of time. We adjusted the fractured leg and dressed the wound in the face—but on examining the clavicle, found that it *fell into position* and retained its place, while in the recumbent posture, better than we could accomplish by any bandaging or dressing whatever. There was much tumefaction from effusion of blood at the point of fracture. To this part, we kept ice-water constantly applied on wetted pads. The case did remarkably well, and the fractured clavicle healed before the fractured leg.

We are told by a lady, formerly a patient of Dr. L. A. Dugas, that when a child, (it must be understood the lady is still *young*), she fractured her

clavicle. Dr. D. set it, and it had nearly united, when, in childlike exuberance of spirits, she imprudently fractured it again—and it was again adjusted. The Surgeon, however, took occasion to make the following suggestion: “My Dear, the next time you are so unfortunate as to break your collar bone, I would advise you to break your leg too, and then you will not have to undergo the pain of having the collar bone re-set.”—This bit of advice, so jocosely given by our kind-hearted colleague years ago to the child, it seems, is now becoming the accepted doctrine of the Profession in the treatment of fractured clavicle. Verily, there seems to be a truth in the terse old proverb—“Many a true word, spoken in jest.”

SALT IN INTERMITTENT FEVER.—A reference to the pages of a back volume of the Southern Medical and Surgical Journal will show that, as early as April, 1852, Dr. L. A. Dugas, Professor of Surgery in the Medical College of Georgia, read a paper before the State Medical Society, in which he reported the efficacy of Table Salt in the Treatment of Intermittent fever: hence the suggestion of Dr. Moroschkin is *not* novel, and finds its original on our pages.

“We learn from the Medical Times and Gazette of Dec., 1856,” says the Peninsular Journal of Medicine, “that a Dr. Moroschkin, practicing in one of the provinces of the Black Sea, states that, during the prevalence of scorbutus and ague in that region, Quinine sometimes entirely lost its power, and that, when no very prominent scorbutic affection was present, he gave 1 oz. of common salt in water, in two doses daily. In patients in whom the paroxysms were incomplete, very abundant sweating followed; the skin became natural, and other signs of amendment appeared; and the dose having been diminished, the cases came to a favorable termination in a few days. If the improvement was but partial, Quinine then became more efficacious. 70 out of 103 were completely cured, the others meliorated. These results correspond with our own observations in other forms of irregular and imperfect intermittents. Less Quinine will usually suffice combined with salt, especially in chronic cases.”

EVE'S SURGICAL CASES.—Messrs. J. B. Lippincott & Co., of Philadelphia, have now in press and nearly completed, a work by our friend, Professor Paul F. Eve, of the Medical Department of Nashville University. This work will consist of a collection of rare cases in Surgery, selected chiefly from American and foreign publications. We have not yet seen the contents of the work, but judging from the extensive experience and thorough acquaintance of its distinguished author in all matters relating to his branch, we are willing to endorse it beforehand, as an interesting and valuable book of reference. The work will be ready for distribution to its subscribers next month. We withhold further remark until we can review the work more at length.

FOREIGN HONORS CONFERRED UPON DR. W. J. HOLT, OF AUGUSTA.—Dr. Holt, while still in the Russian service in the Crimea, was appointed a Member of the Order of St. Anne. He has just received, through the Russian minister in this country, the "Decoration" of Commander of the Imperial Order of St. Stanislaus, in consideration of his services in the Crimea. This last is a cross of massive gold, elaborately wrought, and is a marked testimonial of the Czars appreciation of the ability with which the surgeon's duties were discharged.

We are gratified to call attention to our original department. Professor Joseph A. Eve's article on Diseases of the Cervix Uteri, will be read with much interest by our subscribers, on account of the great reliability of the opinions and precepts of one so experienced, and withal, so recondite in his important department. An earnest worker and teacher in Obstetrics for nearly twenty years, as Dr. Eve has been, must have arrived at such truth in the Art, as to render his words "apples of gold in pictures of silver," to the young practitioner. His truly practical paper will be completed in our next number. Several of our Faculty are engaged in preparing valuable papers, all of which will find issue in our pages.

MEDICAL COLLEGE OF GEORGIA.—This Institution will begin its 26th annual session on the first Monday in November, with an Introductory Lecture from Professor H. V. M. Miller. The prospects for an increased class are most encouraging. Relying upon the experience of our Faculty, the completeness of our arrangements and appliances for the teaching of the true principles of Medicine, and above all, upon the faithful spirit which moves every member of our corps to do well his part—we proudly refer to our influential alumni, now nearly one thousand in number, to vindicate the claims of Augusta, as an efficient school of Southern Medicine. We call the attention of our readers to the Circular published under cover of our July number.

MEMPHIS MEDICAL RECORDER. EDITORIAL CHANGE.—This excellent Journal comes to us in the present number under an entirely new and much improved form. Its late editor, Prof. A. P. Merrill, has devoted five years most laboriously and successfully to its interests, and now resigns the work into the hands of Daniel F. Wright, M. D., Professor of Physiology and Pathology in the Memphis Medical College. Professor Wright is by no means, a stranger to the duties of the Editorial office, and still less is he a stranger to the readers of that Journal or to the Profession. He has been long known as one of its ablest contributors and most astute reviewers. We welcome him most cordially into the fraternity, and we wish his readers, as well as the editor, well, when we desire for this Journal an extended

circulation. The present number contains an elaborate and valuable article, by the new editor, on the Pathology of Zymotic Fevers—an Appendix to the Report on the Nosology and Meteorology of Memphis, Tenn. These views are striking, and we intend to present them shortly to our readers.

The typographical execution of this Journal is very creditable. It is published every two months by the Memphis Bulletin Company.

THE MEDICAL INDEPENDENT—A NEW ACQUAINTANCE.—We have received three numbers (June, July and August) of this new monthly Journal, and are pleased to place it upon the list of our Exchanges. Each of the numbers we have seen contain much valuable original matter, and well selected articles from domestic and foreign Journals. The Independent is edited by Moses Gunn, A. M., M. D., Professor of Surgery in the University of Michigan, and L. G. Robinson, M. D., and is published in Detroit, by H. Burna. A personal acquaintance with its editors, formed during the last meeting of the Association at Nashville, renders it a welcome comer to our sanctum. We wish them a wide circulation, and a long, happy and useful career.

"Wee worth the chase, wee worth the day—
That cost thy life my gallant Bay."

"We notice in one of our exchanges," says the *Western Lancet*, the recent death of a horse owned by Dr. Edward Dorsey, of Hagerstown, Md., in the 45th year of his age. The Doctor had used him in his practice for thirty-seven years. He well deserves an obituary.

On the Cutaneous Degeneration of Warty Excrescences. By Mr. BUTCHER, Surgeon to Mercer's Hospital.—In this paper, Mr. Butcher relates seven cases which illustrate that association between warty excrescences and cancerous degeneration, which has not met with all the careful attention from writers to which it is entitled. These cases show very clearly that, when once the ulcerative process is set up, there is never any amelioration, ever so temporary, no attempt at cicatrization; and that there is in addition a great liability to the appearance of encephaloid disease, either on the site of the original tumor or in the line of absorbents connected therewith.

In the same paper, moreover, Mr. Butcher relates four cases of encephaloid cancer occurring as an isolated manifestation of malignant disease.

[*Dublin Quarterly Journal of Med. Science.*]

Ergotine in Epidemic Diarrhœa. By M. MASSOLA.—In a communication to the Academy of Medicine in Paris, M. Massola states that he found great benefit from the use of ergotine in the fatal epidemic diarrhœa, which prevailed so extensively among the Sardinian troops in the recent campaign in the Crimea. From fifteen to twenty grains were added to ℥viii of water, and a tablespoonful of this mixture was given every half hour. M.

Massola states that astringents, tonics, opiates or stimuli, were of little avail as compared with the ergotine.—[*Gaz. Hebdom. de Méd. et Chirurg.*, and *Rankiny's Abstract*.]

On the Removal of Tumors. By Dr. SIMPSON, of Edinburgh.—Dr. Simpson's plan is to introduce a hollow acupuncture needle or very small trocar into the tissue of the tumor, and inject a small quantity of chloride of zinc, perchloride of iron, creasote, or some other irritating solution. The effect of this operation is to destroy the vitality of the tumor, and to allow it to be separated by a process of enucleation.—[*Med. Times and Gaz.*]

Costly Medicine.—A London (Eng.) paper says: "The consumption of wines in our public hospitals constitutes one of the heaviest items of their expenditure. The wine account a Guy's Hospital last year was £1083; the spirit account, £376—total, £1459. At St. Thomas's the wine account was £629; spirit account, £521—total, £1150; or £2609 in one year in the borough hospitals alone."—[*Boston Med. and Surg. Journal*.]

Medical Ethics.—A letter of advice equivalent to a consultation, and should be in like manner remunerated.

MESSRS. EDITORS,—Suppose you were to receive a letter, filling full three pages of fair foolscap, and reciting all the facts (to the writer) of a case, reporting the treatment, and finally asking an opinion and an advice—but containing neither fee nor postage stamp. What would you do? Would you read it? Suppose you do read it, but can really make no opinion, either of diagnosis, prognosis or treatment. *Would you answer it?*

Again: Suppose you receive another letter from another source, *without any enclosure*. Suppose you *can* form an opinion about the disease, and might recommend a treatment. Do you feel bound to answer it?

One largely afflicted brother in this way, impatiently waits an answer.

XENOPHON.

With regard to Xenophon's first question, we think the practitioner is not bound to take notice of a letter containing neither fee, postage stamp, nor an intelligible account of the case. He may, if he pleases, put the letter in the fire. We should read it, but should not, under ordinary circumstances, answer it.

As to the second query, we should withhold an opinion until the fee were paid, if the request came from an unknown party. We should not feel bound to answer it.

A person writing a description of a case, and requesting in answer an opinion or advice, is bound to enclose in his letter the usual fee, or to ask the amount owing, and to transmit it by return mail. (The fee for a letter of advice, established by the Boston Medical Association, is from *five to ten dollars*.) It is always understood that a business letter requiring an answer (except between regular correspondents), should contain a postage stamp.

We state our opinion in general; of course there are exceptions. A former pupil or a personal friend has a right to ask an opinion without being expected to pay for it; but this privilege is not to be abused, especially in a case really requiring a consultation, the patient being able to pay. When the patient is too poor to pay the fee, if this is distinctly stated, the

party giving the opinion will ask no compensation. In short, a letter of advice is the same thing as a consultation, and the writer is not only entitled to his fee, but ought to insist on receiving it, where the advice is regularly sought, and the patient able to pay.—[*Boston Med. and Surg. Jour.*

Prizes for the Massachusetts Medical Society.—The Massachusetts Medical Society is authorized, by a donation from one its members, to offer the sum of *one hundred dollars* for the best dissertation adjudged worthy of a prize on the following theme, viz: "To what affection of the lungs does bronchitis give origin?" The above is open to physicians of every country. The latest article on the relations of bronchitis to other diseases of the lungs was written by Dr. W. F. Gairdner, of Edinburgh, in 1850. A review of the paper can be found in the *British and Foreign Medico-Chirurgical Review* for April, 1852. Each dissertation should be designated by a motto, and accompanied by an envelope, superscribed with the motto, and containing the writer's name and address. The sealed packet, accompanying the successful dissertation, will be broken and the author's name announced at the annual meeting of the Society in May, 1858.

Dissertations for the above prize must be sent (post paid) to the Corresponding Secretary, Dr. Benj. E. Cotting, Roxbury, Mass., on or before April 15th, 1858.

Yours truly,

J. B. ALLEY, M.D.

Rec. Secretary.

HOMŒOPATHY.—When all the world elsewhere seem to have abandoned this apostacism, what a pity that in certain parts of our country it should still exist!

Death of Homœopathy.—I have another death to record, but with feelings very different from those which prompted me to do so in Scoresby's case. It is the death, not of an individual, but of one of the instruments of a system which is fast on the wane, and will shortly be reckoned as one of the "strange things that were." *The London Homœopathic Hospital, devoted to this delusion in London, has closed its doors!* The *Lancet* says, while recording the melancholy event, that, "like all quackeries, it had its day; like all quackeries, it has been supported by the shallow, weak and credulous, on the one side, and the charlatan and the rogue on the other. Such alliances are invariably broken when either the eyes of the one are opened, or the rapacity of the other is not gratified." Poor Lord Robert Grosvenor, the champion of Homœopathy, has confessed himself diddled, and declares he has been humbugged from first to last. He now employs a regular practitioner.—[*London Cor. of the Montreal Med. Chronicle.*

London Homœopathic Hospital.—The last hospital devoted to this delusion in London has closed its doors. It has dwindled down into a "temporary office" and a "dispensary for out-patients. We hear much of the success of Homœopathy, and yet the friends of the humbug cannot subscribe sufficient funds to support a "hospital" even at a private house. Like all quackeries, it has been supported by the shallow, weak and credulous on one side, and the charlatan and the rogue on the other. Such alliances are invariably broken when either the eyes of the one are opened, or the rapacity of the other is not gratified.—[*Lancet*, April 4, 1857.—*Med. News and Library.*

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ORIGINAL AND ECLECTIC.

ARTICLE XXVIII.

Creosote in Dysentery, with Cases. By WILLIAM H. McMATH, M.D., of Lewisville, Lafayette County, Arkansas.

Having for the last two years been witnessing the effects of Creosote in Dysentery, I feel that I should be recreant to my responsible trust as a physician, did I not make the same public through the pages of some medical journal, to the profession generally. Hence, I send this article to the *Southern Medical and Surgical Journal*. Whether this remedy will prove to be as valuable as my experience seems to indicate, remains yet to be proved; and it is with the view to elicit such evidence, that I make this publication. This is the formula that I am in the habit of using:

R Creosote, gttæ. x.
Acetic acid, " xx.
Morphia sulph., grs. ii.
Water, pure or distilled, ʒi.

Of the above mixture, I am in the habit of giving to an adult, a teaspoonful every two or three hours, until it checks the blood and mucus in the evacuations from the bowels. It is sometimes the case, in a very irritable state of the bowels, that yellow, green or dark serous evacuations will continue after the blood and mucus have been checked, which the creosote appears not to be so effect-

al in checking, as anodynes and astringents; though, in nine out of ten cases, it will check and completely hold at bay, the discharges of every character from the bowels in this disease.

Furthermore, I will state, that in my hands, I find it to be perfectly admissible in every case. It matters not to what extent the febrile excitement may be raging, or how low the nervous system may be depressed, it is the same in its mission, perfectly safe and admissible at any and every stage of the disease, and has, in my hands, as certainly cured dysentery, when properly combined with other agents—as quinine has cured periodic diseases. I admit that there are collateral agents necessary, in some protracted cases, to effect a radical cure. I can at least claim for this agent, that it will hold the drain in complete abeyance until the necessary auxiliaries can be brought into action, and completely eradicate every trace of the disease from the system: this it will certainly do. In mild cases, I have found it necessary, only to give a few doses of the above prescription to produce a cure.

That I may be better understood, I will record a few cases whilst under treatment.

June 11th. Called to see Mr. F., aged 20 years, of plethoric habit. He informed me that he was attacked during the night with flux. For the last eight hours, he has had ten or fifteen evacuations from the bowels of clear blood, with a little mucus floating therein. Skin hot and dry; tongue dry, with a brown coating, red around the tip and edges; pulse 120; very tender on pressure over the bowels.

Treatment.—Calomel and Dover's powder, broken doses, alternated with creosote mixture, every two or three hours; warm poultices to the bowels.

June 12th. Sent for in haste; found patient with extremities cold; pulse scarcely perceptible at the wrist; had frequent bloody actions during the night, and much nausea; tormina excruciating, tenesmus constant and harassing.

Treatment.—Sinapisms to the extremities and stomach, and wine whey. Prescribed one teaspoonful of creosote mixture every three hours.

18th. Tongue still furred and dry, red around the edges and tip; great thirst; pulse 110—skin hot and dry. Had from the bowels three actions only. Directed the creosote to be continued, and blue pill at 8 o'clock at night.

14th. Patient rested well last night; has had two or three bilious evacuations during the night. All symptoms much improved. Directed the creosote to be continued. From this time on, the patient continued steadily to improve, and recovered with no other medicine, save creosote and tonics. I would here state that the above patient had been for two weeks frequently annoyed with diarrhoea, irregular fevers, etc.

CASE II.—June 12th. Called to see Miss R., attacked on the 11th, with dysentery; frequent small bloody and mucous evacuations, with a great deal of tormina and tenesmus; tongue coated, red around the edges and tip; pulse 110 in a minute; pain in the head—had taken castor oil.

Treatment.—Calomel and Dover's powder, in broken doses; warm poultices to the bowels; injection, starch and laudanum.

13th. Symptoms the same; skin hot and dry. Mercury continued; injections of nitrate of silver in solution.

14th, 7 o'clock, A.M. Pulse 120; great thirst; skin hot and dry; great deal of tenderness over the bowels; frequent bloody and mucous evacuations; tongue red around the tip and edges; fur adherent; some nausea and occasional vomiting.

Treatment.—Hydrarg. cum creta and opium; blister to the bowels, sinapism to the stomach, and starch water injections.

5 o'clock, P.M. Found patient almost with continued vomiting; evacuations, pure blood. 100 drops of laudanum in starch water; commencing half an hour afterward giving a teaspoonful of the creosote mixture every two or three hours, until the bloody evacuations ceased.

15th, 7 o'clock, A.M. Patient appears more cheerful; rested well during the latter part of the night; only five evacuations from the bowels since last visit; complains this morning of pain in the right shoulder; eyes yellow, tongue dry, pulse 115.

Treatment.—Mercury in alterative doses, alternated with the creosote mixture every three hours, with a large blister over the hepatic region.

16th. Skin still hot and dry; has had during the night only three evacuations from the bowels, of blood and mucus; very thirsty, bowels tender, pulse weak, 120, and pain in the head and shoulders. Blister drew well; dressed blister with mercurial ointment. Gave calomel and creosote mixture.

17th. Patient rested well during the night; has had no evacu-

ation from the bowels in six hours; a good deal of tormina and sickness of the stomach. Prescribed effervescing draught.

“8 o'clock, P.M. Has had but one small action of blood and mucus; a good deal of tenesmus; patient very restless. Prescribed oil, laudanum, and spirits turpentine.

18th, 7 o'clock, A.M. Tongue more moist, pulse 110; has had four fœcal actions, with some bile; rested well during the night: bowels still tender on pressure.

Treatment.—Calomel, opium and ipecac in alterative doses.

19th, 7 o'clock, A.M. Pulse 95; has had no action from the bowels during night. Treatment continued.

5 o'clock, P.M. Has had no action still. Prescribed castor oil, spirits turpentine and laudanum.

20th. Patient this morning appears much improved, has had during the night some three or four dark bilious evacuations.

21st, 8 o'clock, A.M. Patient since last visit has had one action from the bowels only, and that of a dark bilious character. Other symptoms all much improved; patient quite emaciated and very feeble; tongue moist and cleaning; appetite returning rapidly. Prescribed elixir vitriol 15 drops, three times a day.

24th, 6 o'clock, P.M. Having been absent since the above date, on my return I was called in great haste to my patient. Found her with extremities cold, no perceptible pulse at the wrist; face blanched. Patient very restless; profuse cold, clammy sweat. Patient complains of blindness. On inquiry, on the first day after my absence, I learned that the dysenteric actions had returned, after having been checked with the creosote mixture. Immediately from that time to the present date, the discharges had been of a healthy character and not too frequent. Furthermore, I ascertained that my patient had been afflicted with menorrhagia for several months prior to her sickness. During the last thirty-six hours she had been suffering, to a frightful extent, with uterine hemorrhage, and for twelve hours prior to my visit, cold applications to the bowels had been used, without benefit. Sinapisms to the extremities, acetate of lead and opium had been given internally, without benefit. Ergot was given also without any good result.

12 o'clock, P.M. Patient no better. Consultation requested. Dr. J. R. Wilder was called in, who directed the use of sulphate of bebeerine in five grain doses, every two hours, with stimulants—which checked the hemorrhage in a short time.

25th, 10 o'clock, A.M. Found patient very much improved, reaction fully established, and hemorrhage entirely ceased.

Nothing further worthy of note occurred in this case. This patient, after a very protracted convalescence, recovered entirely.

During the last three years, dysentery or flux has prevailed on Red River to an alarming extent. As regards the treatment, there is less unanimity of sentiment than in any other disease we have to contend with. Standing foremost among the remedies generally used, may be ranked mercury. Used too as this article has been, by every member of the profession, from the merest quack to the most exalted genius, there is, nevertheless, a humiliating deficiency in our knowledge of its utility in diseases generally, and this disease in particular, that seems almost unpardonable. While some practitioners inculcate the propriety of giving and relying upon it, with a degree of enthusiasm bordering almost upon the belief that it is a specific, others, there are, who withhold it entirely, and look upon its use in any stage of the disease as very injurious. Now, that this should be the case, after so much research into the nature of this disease, and so much experience as regards the most successful plan of treatment, is certainly very strange. In most other disorders the profession, by general consent, have agreed either upon the indications this agent is calculated to fulfil, or upon the particular circumstances regulating its employment, but in flux or dysentery we have opinions, recorded and unrecorded, both for and against it. But this is not all: these practitioners, alike, when called upon to sustain their positions, forestal all opposition to their views, by appealing for evidence to the success of their modes of treatment. In all of this there is something wrong, and the truth to some extent lies between the extremes. Among the majority of practitioners in dysentery there is a concurrence of opinion, especially on Red River, that the liver, in a large number of cases, is involved; this being the case, mercury, in many cases, is indispensably necessary. This remedy, if we have any clear conception of its effects, cannot act otherwise than beneficially, applied as these remarks are intended to be, to cases, where there is evidently considerable derangement of the liver.

As the disease frequently commences with discharges of pure blood, many physicians extol the use of the lancet; those who have adopted this practice have been very unsuccessful. This,

with the saline practice, has been extensively used in this section of country. We will not say that patients being treated in this manner, in some cases, do not often recover with apparent facility. We know that in some cases there is a great tolerance of the loss of blood; but the use of the lancet in nine cases out of twelve, to make an antiphlogistic impression on the system, or to attempt to prevent or subdue an inflammation of the bowels, by the use of salines, we think to be of very doubtful propriety, and we are fully satisfied from observation, a very unsuccessful practice. I am fully of the opinion they would do better without any medication whatever. We can see no more propriety in the hemorrhage from the orifice of a lancet, than from the mucus membrane of the bowels. If one is prejudicial, so must be the other, and I do not believe that the position is at all strengthened by appealing to the fact, that in the one case the blood is abstracted in the commencement, in the other, after the disease is fully established; for, if the presence of blood is necessary to keep up and maintain the vital resistance against the encroachments of the malady, it must, therefore, be kept in view as the ultimate and *most powerful cause of vital resistance, which if ever of any importance, is certainly so in this disease*, in which, throughout its whole course, the vital resistance of the system is *primarily impaired*.

Concerning the availability of stimulants in this disease, there is a great difference of opinion. We have steamers in an abundance who use pepper, number six, brandy, red oak bark, &c. Some of our most intelligent practitioners use brandy, opium and camphor throughout the whole disease. Our own views, together with what we have gathered from experience, induce us to favor the stimulant more, at any rate, than the contra-stimulant plans of treatment; they are generally, to say the least of them, productive of little good; we are compelled *sometimes* to hold up the system of a debilitated patient with stimulants, while we unloose the fangs of an inflammation in some vital organ; but it is very probable that the good and bad effects of such a plan are pretty equally balanced.

Of the value of blisters we are, from extensive use, well convinced.

There is still another course of treatment that has many advocates, which consists in the use of *Ipecac* throughout the disease. In the commencement of the attack—the period of incubation—

this medicine given in doses sufficiently large to produce emesis, will in some cases break up the train of morbid symptoms, and make such an impression on the system as will entirely subvert all diseased action; to this stage of the disease the usefulness of this agent is mostly confined. I do not think it will do to rely on, as I have frequently seen great injury result from its indiscriminate use.

To explain the *modus operandi* of creosote in dysentery, I shall not attempt. Suffice it to say, that during the present year, I have used it in over a hundred cases; out of that number, a good many cases were treated in the outset after the usual course laid down by our standard works. In eight out of twelve cases I was compelled to resort to the creosote or lose my patients. I am thoroughly convinced from experience, that if not a specific in this disease, it will, beyond the shadow of a doubt, do more in effecting a cure, than any other agent, or combination of agents I have ever tried, or have known to be tried. I am sure that it only requires a trial to convince all who may use it, that I do not claim as much for it, as it is justly entitled to at the hands of the profession.

ARTICLE XXIX.

An Anomalous Nervous Disease. By W. C. BRANDON, M. D., of Floyd county, Ga.

The novelty of the case which I am about to lay before the reader, will be apology sufficient for its publication.

On the 4th of April last, I saw Mrs. E—, *ætat* 74: of sanguine nervous temperament; of active habits, for a woman of her age. Found her in the following condition:

The muscles of the left extremities were in a constant, rapid and powerful convulsion; the limbs were thrown into all possible positions—flexion, extension, rotation, abduction, adduction, pronation, supination; not a muscle in either arm or leg, but what seemed to be in action almost every moment. Except during sleep, these convulsive movements were incessant, and so powerful that they could not be restrained by the aid of the attendants, without resorting to force incompatible with the comfort and safety of the patient.

The muscles of the trunk, neck and face of this side (the left)

were, to an extent, similarly affected; but as the muscles of these regions are more limited in their movements, of course the symptoms were less prominent than in the extremities. All volition over the muscle of that side was paralyzed. The patient seemed frequently to make great effort to bring the will to bear upon the muscles, but without effect. Upon the right side there appeared nothing abnormal; but the limbs were fully under the control of the patient, and she would frequently seize the left with the right hand, and endeavor to restrain its spasmodic movements, or protect it from abrasion, &c. She suffers no pain, sensation perfect, intellectual faculties unimpaired; pulse 85 to 90; tongue slightly furred; appetite good; thirst rather inordinate, not intense; face somewhat flushed; skin natural; bowels regular. Upon enquiry, the patient gave me the following, which seemed to be a very intelligible account of her attack:

For two or three days before the convulsions came on, she had had vertigo, with some slight headache. Her appetite had been craving—had indulged freely. On the day preceding the attack, at night, she had ridden on horseback two or three miles. That afternoon could hardly sit up, owing to the vertigo; but ate freely of meats, &c., at night. Soon after lying down she felt a lancinating pain in the region of the cerebellum or medulla oblongata, which continued, at intervals, for several hours, and then ceased. About the time she experienced the pain, she became very restless, a general malaise pervading the system, and in a short time the convulsions set in. For some years she had had very frequent attacks of diarrhoea; but for the last six or eight months, her bowels had been in a better state; rather disposed to constipation.

Her father and a sister had died of paralysis, of short duration, (perhaps apoplexy?)

I first saw her thirty-six hours after the attack, and found her as above described. After observing her condition for a time, I find that she sleeps occasionally, from five minutes to three hours. During sleep, every convulsive movement ceases; not the twitching of a muscle visible; and she, to all appearances, rests as comfortably and sleeps as quietly as in health. But upon the very instant of waking, the terrible agitation of the muscles begins anew, which continues until sleep again interposes for its temporary cessation. The intervals between sleep are from one to six hours.

After the case had progressed several days, she suffered from what she termed, cramp in the side: caused, I presume, from the spasms of the muscles in this region. I should have stated, that there were none of the ordinary evidences of spinal irritation—that is, no tenderness from pressure. While I frankly confess the difficulty of arriving at a perfectly satisfactory diagnosis, I venture to give the reader my conclusions in the case—viz., that it was an irregular form of apoplexy.

I will not claim the patience of the reader, and the space here, for the useless detail of the condition of my patient, and the prescriptions made, day after day, during the whole progress of the case; but will give, briefly, the plan pursued.

In the first place, cups and blistering to the nucha, sinapisms to the spine, hot mustard foot-bath, cold to the head, and active catharsis with aloes, rhubarb and calomel were employed. This treatment proving of no utility, opiates and antispasmodics, camphor, chloroform, internally, &c., were then resorted to; counter-irritation continued. These remedies, with cathartics, when required, were kept up for several days. But the means employed produced no modification of the symptoms whatever, only so far as the opiates induced sleep, and gave the patient longer periods of rest than she otherwise would have obtained; this being the only means that rendered her case tolerable.

At my second visit, Dr. M. R. Ballenger saw the case; whose opinion was consulted, and acquiescence obtained in the treatment.

On the eleventh day of the attack Dr. H. V. M. Miller saw the case with me.

Other remedies having failed, we determined to try the effects of blood-letting, and nausea, by tart. emetic. Whatever benefit these means might have produced at an earlier period, in the case, we cannot say: at this time, they were as nugatory as those that had preceded them.

The symptoms continued the same, except that the convulsions were less vigorous, as the general muscular strength gave way—which it did by slow degrees, almost from the inception of the disease. There was considerable abrasion of the more exposed portions of the affected limbs, for which ordinary remedies were used. For three or four days preceding death there was some delirium, but for the greater portion of the time there was no

mental aberration apparent. Death occurred on the fifteenth day from the attack.

Death seemed to be the result of sheer exhaustion, from the long-continued and powerful muscular action. As the general strength yielded, the convulsions became less and less violent, until the last hours of life the movements amounted to little more than a slight twitching of the muscles.

Here we have a disease preceded or ushered in by vertigo; severe, but temporary, pains in the region of the cerebellum; rapid, involuntary movement of the muscles of one half the body, with paralysis of volition on that side; sensation perfect. The other side unaffected. No morbid mental manifestations. What is it? Was my diagnosis correct? I am free to acknowledge that there were no truly pathognomonic symptoms of apoplexy; but the same difficulty obtains in the probability of it being any other disease.

While the reader may not agree with me in diagnosis, he will readily consent to the singularity of the case, and that it bears but little analogy to any disease, as described in the books, at least in such as I have access to. As stated in the outset, the singularity of the case has induced me to give this brief and imperfect account to the profession, and not from any practical benefit that might result from its publication.

[A private letter from the reporter of the above interesting case, has induced us to attempt some investigation for its explanation. Were it not for the advanced age of the patient, we might, at first glance, suspect that here, we had a case of chorea; it presents, in a marked manner, some of the characteristics of that fearful disease; but we think that it more nearly simulates what Dr. Todd, in his Clinical Lectures, terms "choreic hemiplegia." If such is its nature, it is an extremely rare case of a rare disease; for every one of the few cases reported by him have occurred in children or persons in early life. There can be little doubt, that there are states of the nervous centres *approaching* the apoplectic, in which, while the control of volition is null, yet the polarity of the motor centre is exalted. This is doubtless the ordinary pathological condition in true chorea, and we have but little doubt, that it is such in what Dr. Todd terms choreic hemiplegia, of which we feel constrained to recognize a case in the one above reported.]

ARTICLE XXX.

A few words in Defence of Veratrum Viride. By U. G. MITCHELL
WALKER, M.D., of Cahawba, Alabama.

In this short communication, I propose to make a few remarks upon the virtues of *Veratrum Viride*, in the treatment of inflammatory affections, particularly those involving the lungs and pleuræ: not that I believe, I can add anything new, to what is already known upon the subject, but only hope that these remarks may induce some one who is disposed to be skeptical and unwilling to use a *new remedy*, to make a fair and impartial trial of it. I have very little doubt that if such a one will judiciously use it, under favorable circumstances, that he will be convinced of its usefulness and well deserved merit.

Now, when inflammatory action is going on in the "capillary structure" of the lung, and high inflammatory fever prevails, with the symptoms consequent upon the inflammation, to relieve this excitement and bring about resolution, to restore a perfect physiological action without exhausting or carrying the patient through a severe depletory course, from which he takes weeks, and in some instances months, to recover, surely the physician achieves a great end when he can do it by milder means, and with greater safety to his patients. In *veratrum viride*, I believe, to a great extent, we have a remedy capable of accomplishing such an end. Though not ignoring the lancet, when properly used, or believing that *veratrum viride* has rendered it entirely useless, I believe *veratrum* to be a great adjuvant when we wish to keep up the sedative influence produced by the lancet.

Veratrum viride has probably done as much good in the treatment of *pneumonia*, and exerts as much control over this disease, under certain circumstances, as any drug in the *Materia Medica*; and without wishing in this article to speak of its general application, I shall confine my remarks to its use in the relief and cure of *pneumonia*.

Of late years, this disease seems to have undergone a modification, and does not demand the use of those active depleting evacuates once so much in vogue for its relief, and without which no judicious practitioner would consider his patient safe. But at the same time that it has lost, as it seems, the former severe inflam-

matory action, still vascular excitement is sufficiently high to call for a medication, of a depletive, or more strictly speaking, a sedative character. Inasmuch as the *pneumonia* seems to assume a type intermediate between a sthenic and an asthenic character, it does not demand the active depletion which true sthenic pneumonia calls for, and, on the other hand, it is not sufficiently asthenic to require a stimulant or active stimulating treatment, at least in its first stage. Now, for the management of this form of the disease, *veratrum viride* seems especially adapted. Whatever may be its precise *modus operandi*, and whether it exerts a change over the constitution of the blood, which favors a convalescence, yet remains to be proved. But it is evident that patients recover very rapidly, and without any of the unpleasant symptoms often noticed after active cathartics and bloodletting have been employed. At the same time that it exerts so powerful a controlling influence over the excited action of the heart and vessels, and controls the excessive supply of blood sent to the inflamed part, by the sedative action of the remedy, we allay too, to a great degree, the exalted nervous action frequently noticed in many cases, without the use of opiates, which, under some circumstances, may be injurious. Again, at the same time too, that we see it exerts this happy tranquilizing and sedative effect upon the nervous and circulatory systems, it excites the secretions and favors the rapid convalescence by thus aiding expectoration and diaphoresis. And this happy effect upon the system can be attained without producing the *least unpleasant* symptom. Many, I believe, abstain from making use of the remedy, when their better judgment would dictate its use, from fear of the unpleasant effects its opponents urge against its use. To such, I think they *need have* not the *slightest ground* of fear, if it is properly and judiciously administered. A remedy possessing such decided power, common judgment at once says "use it cautiously," and when thus used, I repeat, no one need entertain fear of evil consequences from its administration. When through the urgency of the case, we are obliged to make a free use of the medicine, and nausea and slight prostration supervene upon its application, it is immediately overcome by the administration of a few drops of laudanum, or essence of ginger, or brandy and water.

Some oppose its use by saying—owing to certain "abortivant effects" it possesses, it cannot be given when pregnancy compli-

cates the pneumonia, but these objections, so far as I have been able to ascertain, are entirely groundless. When excessive nausea and powerful emesis occur from a heroic administration of it, I dare say, owing to the *great disturbance* of the *whole economy*, miscarriage in some instances may have occurred; but would not the same result have followed an over-dose of tartar emetic, or any powerful emetic and depressor? Again: and coming from such high sources too, which makes me tremble, almost, to assail in the most delicate manner, lest I should be severely handled by them who have grown grey in the profession—some say, “yes, we admit you can control and bring down your rapid and bounding pulse from 130 or 140 beats per minute, to 75 or 80, or even as low as 45 or 50; but at the same time you control your pulse, you do not control your disease, and thus, by taking away the index you cannot tell what the true condition of the circulation is, and leave you in doubt relating to the true condition of the patient.” Now, at first, this seems to partake of philosophy, but let us examine and see if theory, or what is better than all speculation, if actual experience will sustain it. Now, when we have this excessive action in the circulation going on, with this high bounding pulse, owing to the powerful action of the heart, we have an inflamed surface where this constant rush of blood is continually going on, keeping up the congestive and inflammatory state in the capillaries, and producing stasis when it is sufficiently long kept up, which results in destruction of the parts; now, when we bring to bear a force which exerts a sedative influence over the organ which acts as propeller, does it not seem rational to suppose that when we bring about this sedation, that a resolution of the inflammation is at all events likely to ensue when we withdraw the excessive action?—analogical reasoning would seem to draw such a deduction. But in addition to this, we have the testimony of experienced physicians, and those men too, practical in the extreme, who, with sound judgment, *never allow* beautiful theory, or anything partaking of the flight of fancy, to allure them away. Those who are practical in an eminent degree, give us their testimony to the effect, that when such a state of things exist, they have seen *veratrum viride* work wonders.

But lest I seem to laud too much the virtues of a valuable remedy and weary my readers, I will desist, and close this article by recommending the mode and dose, from which the happiest effects

result, unaccompanied with any unpleasant symptoms: Commence with 4 or 5 drops, or when you have reason to believe your patient easily affected, as low as 2 or 3 drops, with a little sweetened water, repeat this dose every hour with an increase of a drop at each dose, until the patient is brought under its influence.

By thus using it, we have perfect control of the medicine, and by the time we attain to 10 or 12 drops, the patient usually becomes tolerant to the medicine, and we can keep him under the full effect, either by increasing or diminishing the dose, according to circumstances.

The Use of Water in the Treatment of Fever. By ISAAC CASSELBERRY, M.D., of Evansville, Indiana.

We find in the American Journal of Medical Sciences, July number, of the present year, an article on the above subject, which we regret that our space will not allow us to present in full to our readers. Any discussion of this important question which is calculated to bring before the profession the judicious use of this powerful therapeutic agent, in the treatment of fevers, we regard as valuable, for we have ever regarded it rather in the light of a reproach to us, that we owe so much of the attention it now receives to specialists and ultraists—the Hydropathists. Dr. Casselberry's discussion, however, has proceeded upon entirely different principles from those which result from empiricism, and we are pleased to see true physiological reasoning so well applied in the investigation of a therapeutic measure which, until recently, has only received an empirical recommendation.

Starting with a careful consideration of the anatomical, physiological, and pathological relations of the cutaneous and mucous surfaces of the body, and applying them carefully in reference to the phenomena of fever, he seems to have omitted none of the bearings which these multifarious facts sustain to each other, and as one of the grand results of his induction, he educes the conclusion, if we understand him aright, that in febrile conditions of the system, there obtains generally, a superabundance of oxygen in the tissues of the free surfaces of the body, and that the predominance of this element contributes largely to the discomfort of the patient, the heat, the imperfect and abnormal nutrition in these various surfaces, and the body generally. He then considers the subject in its

chemico-vital relations, and in its relations to the two nervous systems, both cerebro-spinal and secretory or ganglionic, (which we prefer to his term, "automatic,") and finally comes to the practical view of the subject, and to the various methods of practically applying the mode of treatment his essay is intended to advocate.

"The diminished quantity of the organizing force in the external capillaries, caused by recession of blood from these vessels into the portal venous system chiefly, the superior intensity of the chemical force in the blood, thus accumulated in this system in augmented quantity but perverted quality, and the consuming force of the imperfectly combined oxygen of the atmosphere, introduced into the blood at each inspiration, resist the fulfilment of this restorative indication. The imperfectly combined oxygen is not only consuming, by molecular combination, the nutritive elements of the blood, but also the solid tissues.

"A complete lesion of nutrition is soon produced; the chemical force, in its multiplied forms, rapidly augments in intensity by superior quantity; the sensations of *thirst* and of *increased heat* are urgent and agonizing; *pain* is felt; oxygen is consuming the sensitive nervous branches.

"The *first* indication to be fulfilled is the *removal* of this *oxygen*. This must be done by molecular combination.

"As vacuity always favours absorption and repletion retards it; and as the external capillaries are comparatively in the former condition, while the hepatic and renal capillaries are strictly in the latter, it follows that absorption would take place with much more celerity in the former. When this abnormal state of the circulation is associated with the physiological fact, that the different forms of the automatic nervous force maintain and control the elements of the blood in the external capillaries, while pathology as plainly indicates that those of the chemical predominate more or less over these elements in the visceral capillaries, a comprehensive appreciation of the varied functions of the organism and of the compensatory assistance they afford each other, most conclusively show, that curative means should be addressed to the external capillaries commensurate with their depurative and compensatory functions.

"This proposition is supported by the anatomy and physiology of the cutaneous tissues as well as their physiological relation of function and pathological compensatory assistance. We have abundant evidence that the sensitive and excito-motory nervous branches are largely distributed to the tissues, through which the external capillaries are ramified, by which these nervous branches are supplied with nourishment, and receive the disturbing impression of the chemical force; that the tissues to which the visceral capillaries are distributed have no sensitive and excito-motory

endowments; that the sensitive nervous system is the agent the automatic employs to bring the organism into relation with the external world; that the excito-motory is the agent it uses to protect the organism from external objects; and that these two nervous systems often lend a compensatory aid to the automatic. Their restoration and conservation should, therefore, always be a primary object.

"The existence of imperfectly combined oxygen in the external capillaries will, for this physiological reason, be instantly evinced by the sensation of pain and increased heat of the skin and the manifestation of involuntary muscular motions, while a proportionate quantity of uncombined oxygen in the visceral capillaries, which have not these nervous endowments, would only excite the sensation of *thirst and oppression*. The imperfectly combined oxygen should, therefore, be consumed by molecular combination in the external capillaries and be removed by secretion, so that the sensitive and excito-motory systems would be in a condition to lend compensatory assistance to the automatic in the depuration of the blood in the other depuratory glands. How can the removal of the imperfectly combined oxygen of the atmosphere in the external capillaries be accomplished? By the *use of water*. Its temperature and its mode of application must be governed by the state of the different forms of the automatic nervous force. This is indicated by the augmented or diminished quantity of blood in the external capillaries; by the temperature of the skin; by the mechanical force of the muscular action of the heart and arteries; by the state of the venous system, whether congestion exists in any of the great depuratory glands or not; by the decreased and perverted, or the increased and perverted, sensibility of the sensitive nervous system; by the irregular and involuntary muscular motions of the excito-motory system; by the lesion of the nutritive process; and by that of those of secretion.

"When warm water is properly applied to the cool skin, a certain quantity of its heat is instantly transmuted into animal electricity. This gives increased intensity to all the forms of the automatic nervous force; the molecular changes of the blood are augmented and accelerated; water is absorbed; the imperfectly combined oxygen in the blood attracts the hydrogen of the water, combines with it, and is secreted in the form of sweat; the oxygen of the water combines with the carbon of the blood, evolves heat, and is secreted in the form of carbonic acid gas. A comfortably soothing sensation reigns supremely through the tissues endowed with sensitive nervous branches. The external capillary circulation is greatly augmented and accelerated; an increased quantity of arterial blood is attracted and introduced into these vessels by the superior intensity of the molecular changes of its elements; the mechanical force of the muscular action of the heart and arteries is stronger and more tranquil; respiration is freer and less

hurried; copious sweating ensues; and a large quantity of effete elements are depurated from the blood.

"When the skin is hot and dry the water used should be cool. Why? Because there is an abnormal quantity of animal heat and electricity retained in the external capillaries by deficient secretion.

"The low temperature of the water increases its capacity for animal heat and electricity, and promotes the affinity of its elements for each other. When it is applied and retained upon the skin, it attracts animal heat and electricity, and causes the secretion of an increased quantity by the cutaneous glands. When the aggregated heat and electricity are thus removed, the different forms of the organizing force assume increased activity; water is absorbed and decomposed; the molecular changes, which then ensue, are the same as those that transpire when warm water is employed.

"Sweating may, and often does transpire freely without any considerable diminution of the temperature of the skin; because it is only one of the processes of the secretion which takes place in the cutaneous glands. In this state of the skin, the indications for the employment of cool water are nearly the same as when it is hot and dry." * * * * *

"I have shown that the hepatic, renal, and intestinal capillaries are more or less replete according to the degree of portal congestion; that repletion retards absorption; that the different forms of the chemical force predominate over those of the automatic, when this congestion exists; and that this predominance always decreases and alters, or augments and perverts absorption and secretion in a proportion of equivalence to its degree of prevalence. Hence it is an obvious fallacy to endeavor to restore the normal secretory action of the hepatic, renal, and intestinal glands by the introduction of large quantities of water into the alimentary canal. It is not only erroneous, but often positively injurious, because the mechanical force of distension by an elastic substance like water always favors absorption, while it proportionately retards secretion. The capillaries of these glands are already too much distended by the aggregated blood; why increase their distension by the introduction of water? The blood is so altered in quality, and so perverted in elementary arrangement and chemical composition, that it cannot undergo normal molecular changes. Will not the additional water introduced by abnormal absorption augment the perversion of the cellular mutations between the elements of the blood by the superior intensity of an increased quantity?

"The sensation of *thirst* is urgent and agonizing. Will the drinking of copious portion of cold water allay it? The experience of every physician answers that it will not; but, on the contrary, it will do a positive injury so soon as the quantity is sufficient to distend the stomach, and, by the mechanical force of its

pressure on the mucous coat, accelerate its absorption, unless it be happily ejected by vomiting, when the sufferer will feel joyously relieved. A few moments' sweet repose will follow, when the sensation of thirst will return, if possible, more agonizing than before. If copious draughts of cold water afford no relief, if it often be a positive injury, what must be done? Do what pathology imperiously demands.

"Neutralize, by molecular combination, the imperfectly combined oxygen of the atmosphere in the blood by the proper use of water. How can this be done? Appease the urgent thirst by the use of ice, broken into small pieces and swallowed; and when ice cannot be obtained, by small quantities of cold water. Ice is more efficacious than water; it is much more slowly absorbed, and seldom or never does injury by distension. Its hydrogen is at first feebly attracted by the imperfectly combined oxygen in the blood; only a small portion is combined and forms a component part of the water of the blood, while its oxygen has a feeble affinity for the carbon of the blood, in consequence of the imperfect elementary arrangement of the molecular combination of the carbon. As but a small quantity of the water of the ice is absorbed and decomposed, its hydrogen neutralizes by combination an equally limited amount of the imperfectly combined oxygen in the blood; and as this oxygen is introduced in ample quantities at each inspiration, it follows that its consumption should be commensurate with the quantity introduced. Hence the necessity for the employment of water externally. The skin presents a surface of about fifteen square feet, and is liberally endowed with absorbent and secretory glands. These have the same tissual endowments as the same kind of glands in the abdominal and thoracic organs, and associated in intimate structural arrangement are sensitive and excito-motory nervous branches. As pile upon pile increases the intensity of the electric current, so endowment upon endowment augments the resistance of any particular class of tissues to the force of a disturbing cause.

The *mode* in which water should be employed when the design is to remove imperfectly combined oxygen from the blood, is plainly indicated by the anatomy and physiology of the skin. The cuticle is of firm structure, and in a greater or less degree covered by an unctuous secretion, which resists the introduction of water by absorption; and, although it is penetrated by a vast multitude of openings or pores, yet these are oblique and often filled by the unctuous secretion, commingled with other secretions and dust so as to resist the admission of water.

"Physiology teaches that cells are the agents the automatic nervous force employs to produce molecular changes in the blood; that they generate and develop, control and distribute animal heat and electricity; that a tissue is a good or a bad conductor of these forms of matter according to the facility and rapidity with which

this force can produce molecular changes; and that the capacity of every tissue for the generation, development, and distribution of animal heat and electricity always bears a relation of equivalence to the quantity and the degree of rapidity which the cellular changes of its nutritive materials may transpire. Hence the fluids and the soft solids produce more of these forms of force or matter, and are better conductors of them than the skin.

"When it is designed to relieve the blood in the external capillaries from aggregated heat and electricity, and imperfectly combined oxygen, it is therefore necessary that the molecular changes should be augmented among the elements of the blood, and that a conducting medium should be applied and retained upon the skin for some time, that the requisite molecular mutations may be produced in the cutaneous capillaries, and that the product of these changes may be conveyed to the surface of the skin. Water is the best medium for this purpose, because the imperfectly combined oxygen in the blood has a strong affinity for its hydrogen, while its oxygen has an equally strong affinity for the carbon of the blood. These reciprocal affinities accelerate the molecular changes of the elements of the blood, and thereby promote the absorption and molecular combination of the water."

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"The local use of water often contributes greatly to the comfort of the patient, and assists essentially in the fulfilment of important indications of cure by consuming the imperfectly combined oxygen, by which the sensitive nervous branches are soothed; the excito-motory, tranquillized; and the automic invigorated. During fever, especially when the skin is hot and dry, three or four folds of linen, wet in cold water and laid upon the forehead, often confers a boon of relief from agonizing pain and burning heat, and thereby contributes essentially to restoring the diseased transformation of the tissues to a normal state by eliciting the compensatory assistance of the sensitive and excito-motory nervous systems. Relieved of the excess of the imperfectly combined oxygen locally manifested by the sensation of pain and burning heat in the external capillaries of the head, these nervous systems impart increased intensity to the different forms of the automatic, augment and accelerate the molecular changes of the blood, and promote the secretion of additional quantities of the effete elements of the blood by the depuratory glands. Congestion of the brain is often only *simulative* not *actual*. This state of the brain is often observed; and I apprehend it is frequently mistaken in our *Western* alluvion districts, in which individuals are exposed to all the atmospheric vicissitudes incident to a climate, whose physical geography is chiefly composed of rich alluvial soil, clothed in forest trees and vegetation luxuriating in gorgeously exuberant foliage, variegated by winding and often sluggish streams, stagnant bayous, and deep, silent lagoons, which, in the summer and a part

of the autumn, are exposed to a high temperature during the day, and a low temperature during the night, causing the atmosphere to be more or less loaded with *warm moisture* during the former period, and a *cool, dense vapor* during the latter.

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"Pathology teaches that the sensitive and excito-motory nervous systems often lend a compensatory aid to the automatic; and that without them the latter could not maintain all the attributes of the human organism; for although the automatic elaborates and appropriates the material to sustain and perpetuate these; yet it must employ one of them as an agent to bring it into relation with the external world, and the other for the production of muscular motion. The automic supplies the *creative, sensitive, and motive* power; the sensitive and excito-motory are endowments which it employs for the manifestation of the higher and nobler attributes of intellectual beings. Hence all these nervous systems maintain a relation of mutual dependence on each other. They all perform functions indispensable to the conservation of the human organism. The imperative necessity for eliciting the reciprocal aid of these nervous systems in simulative congestion of the brain is, therefore, obviously manifest. How can this be best accomplished?

"The automatic system is endowed with the creative and distinctive agencies of the organism. These are no longer equal to each other; the destructive predominates. How can this predominance be subverted? The molecular changes of the blood are not normal. The blood is becoming more and more contaminated by effete elements. Normal nutritive elements cannot be introduced. Those which exist must be depurated. The depurative glands of the skin and lungs have sensitive and excito-motory nervous branches in intimate relation with them, while those of the liver and kidneys are without those efficient endowments which always give increased intensity to the different forms of the automatic nervous force. This combination of nervous endowments, which are ever ready to compensate for the deficient functions of each other, bestows upon the tissues to which they are distributed a much more durable resistance to the force of a disturbing cause than that possessed by those which are endowed with automatic nervous branches only."

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"The molecular changes of the blood in the minute capillaries about the origin of the excito-motory nerves, and that of the sensitive nerves which arise from the medulla oblongata, are increased in intensity, augmented in quantity, and altered in quality; the elements of the blood are formed and transformed, coalesced and rearranged with multiplied celerity; the nervous roots and adjacent tissues are supplied with additional quantities of nutritive material; more powerful reflexed actions are transmitted; the

compensatory aid of these nervous systems begins to be manifested. Now apply a folded napkin, wet in hot water, over the epigastric region; inspiration is freer; an increased quantity of oxygen is absorbed, and an additional quantity of carbon is secreted by the augmented molecular changes of the blood in the pulmonic capillaries. The mechanical force of the muscular action of the heart and arteries soon receives increased power from the altered quality of the blood conveyed to their muscular tissue by their nutritive arteries, and an augmented quantity of blood is propelled and conducted to the external capillaries, in which the different forms of the automatic nervous force have received increased intensity by reflexed action. This intensity may be greatly augmented, and the reflex action made much more conducive to its integrity by enveloping the arms and legs in three or four double of linen or domestic, wet in hot water, and retained for at least half an hour; because the imperfectly combined oxygen of the atmosphere, conducted along with the blood into the external capillaries, would then attract the hydrogen of the water, combine with it, and constitute water, which would be removed and deposited on the skin in the form of sweat; while the carbon of the blood would combine with the oxygen of the water, evolve heat, and be removed in the form of carbonic acid gas. Freed of the consuming force of the imperfectly combined oxygen, the sensation of pain and burning would not be experienced; the compensatory force of reflexed action would be more manifest, because it would be consumed chiefly by imparting increased intensity to that of the different forms of the automatic, and not by the manifestation of perverted sensation and involuntary muscular motions. It would, therefore, contribute to the molecular changes of the blood, and accelerate its depuration in the external capillaries by favouring absorption and promoting secretion. When we review the immense extent of the skin, when we contemplate the magnitude and wisdom of its endowments, we can appreciate the advantages of its agency in the restoration of the organism, when the varied forms of the automatic nervous force are disturbed and ready to invite the oxygen of the atmosphere into the citadel of life. The arms and legs may be constituted into four fields for the subjection of the rebellious elements of the blood; the commanding officer must be selected and nurtured in the cerebro-spinal region; while new recruits must be trained and mustered into the service of the organism along the course of the alimentary canal.

"Copious injections of water should never be omitted in the treatment of fever, as it prevails in the southwest; because there is always more or less biliary derangement; and there is no more efficacious means for the removal of bile and other perverted secretions from the alimentary canal. When the functions of the stomach are so perverted that it will not retain medicine, copious

injections of water often have a very salutary effect by removing the altered secretions and other fecal matters from the bowels, by which they promote the tranquillization of the disturbed reflexed actions of the sensitive and excito-motory nervous systems. This state of the stomach often constitutes a most troublesome complication in the treatment of fever. It is frequently observed in persons who suffer of fever during the hot days of August and September. Copious injections of warm water should be frequently employed; a towel, wet in cold water, should be folded and laid over the entire epigastric region; three or four folds of domestic or linen about six inches in width, wet in cold water, should also be applied over the whole length of the spine and retained for an hour or two; a folded napkin, wet in cold water, may often be advantageously applied over the larynx, especially when the vomiting is persistent. The application of water in this manner, is of peculiar advantage in controlling the persistent vomiting of children during the period of dentition, because of its efficacious influence in tranquillizing the reflexed actions which the evolution of teeth so greatly augments. Both the colliquative diarrhoea and the persistent vomiting which so frequently afflict children during this tender period are chiefly dependent upon, and often are perpetuated by, this perverted nervous action.

"Unless the individual is of intemperate habits the use of water, as here directed, seldom fails to tranquillize the stomach, remove the perverted secretions from the bowels, and prepare the organism for the favorable reception of other remedial agents.

"Dr. Henry F. Campbell, of Augusta, Ga., has published two very able and interesting essays on the pathology of reflexed nervous actions during dentition and during fever, with certain complications. These are invaluable contributions to medical science, and they will serve as beacon lights to every pathologist. (*South. Med. Jour.*, for June, 1850, and *Trans. Amer. Med. Ass.* for 1853.)

"After the bowels are freely moved and the stomach nearly tranquillized, great advantage may often be derived by enveloping the patient in sheets wet in cold water. Dry sheets should be rolled neatly around the wet ones, and the whole allowed to remain until the sensation of heat and pain is removed. From half an hour to an hour will generally be sufficient to produce this effect. The prompt and judicious administration of quinine will generally prevent the recurrence of these symptoms. During the forming state of fever, and often during the first day or two of its progress, obstinate constipation is frequently observed. For the removal of this complication large injections of warm water are peculiarly efficacious, because they neither offend the stomach nor delay the administration of other appropriate agents. They promote the dejection of the accumulated fecal mass and depraved secretions, and contribute to the normal restoration of the perverted nervous functions.

"Diarrhoea is a very troublesome complication of fever, because it greatly promotes the debility consequent upon the fever, causes nutritive material to be voided before it is assimilated, and renders remedial agents much less efficacious. It is often present during the progress of a fever; but it is much more frequently observed during the protracted continuance of a fever as it prevails in our alluvion river bottoms, with a vast multiplicity of complications. No remedial agent is more efficacious in the removal of the cause of this diarrhoea than large injections of cold water. These should generally be employed twice or three times a day; but they may often be advantageously used after each evacuation of the bowels. The long continued recession of the blood from the external capillaries and its persistent lodgement in the portal venous system, contribute to the perversion of the functions of the vast multitude of absorbent and secretory glands along the course of the alimentary canal, because of its accumulated quantity and altered quality in the intestinal capillaries; while the augmented amount and perverted quality of the biliary secretion is conveyed to the organizing force of many of these glands; but this force is so diminished in intensity by the altered quality of the blood in these glandular capillaries, that when the perverted biliary secretion approaches the glands its nascent formative condition is transmuted, and the constituents of the food, which it was forming into elements of blood, are attracted, combined, and dejected with this altered and perverted faecal compound. This constitutes what is commonly called *irritation* of the mucous membrane of the bowels.

"When we see the vast number of absorbent and secretory glands in the mucous membrane of the alimentary canal; when we contemplate the important and multiplied functions they perform for the conservation of the organism, we can easily appreciate the immense advantages of their constant and careful protection, and of their earliest possible relief when disturbed in functional duty.

"In the treatment of this complication of fever I greatly prefer cold water injections to all the much commended astringents, because they seldom favor the production of other and often more dangerous complications, as some astringents frequently do; and they promote the establishment of a state of the organism favourable to the administration of quinine and other necessary remedial agents.

"*Bathing* is often a valuable therapeutic agent to harmonize the relation between the nervous systems when no considerable degree of diseased transformation of the tissue exists. It may, therefore, be often advantageously employed in the forming state of fever, or during the convalescence of a patient."

We are unwilling to conclude even our brief remarks on the therapeutic application of cold water, without referring to the ex-

cellent articles of our valued contributor, John Stainback Wilson, M. D., of Muscogee County, Ga., on "Hydro-therapeutics."

As our readers are familiar with this series of Essays, we do not think it necessary to reproduce them in this place, but would earnestly ask that they be read again in connexion with Dr. Casselberry's treatise, for in these four articles we find collected some of the most thoroughly practical and useful views and precepts to be found anywhere upon this important subject.

We hope Dr. Wilson will continue his Essays, as we think he could not do the profession a better service in the therapeutic department than by so doing. His former articles will be found in the twelfth volume (for 1856) of this journal, the series running through the numbers for October, November and December.

Meteorological and Nosological Report for Memphis, Tennessee; during the first six months of A. D. 1857. With an Appendix on the Pathology of Zymotic Fevers. By DANIEL F. WRIGHT, M.D., Secretary of Board of Health, and Professor of Physiology and Pathology in the Memphis Medical College.

Scattered through this able report, we find, many important views and many valuable facts, which have practical bearing upon the phenomena of climate and disease in their mutual relations. Facts, and tabular statements which can be used hereafter by others, in forming important inductions for the investigation of these and kindred subjects; but it is more particularly to the appendix of the report that we wish to call attention; for here the author has worked up the facts for himself, in that particular train of thought, which make them subservient to a special set of conclusions referring to the etiology and pathology of zymotic fevers. This appendix we beg leave to lay before our readers. The collocation of facts will be found most apt, and the inductions from them of the most striking character. It gives us extreme pleasure to see, how now medicine and medical and pathological phenomena are beginning to be investigated, not hastily and skimingly and slouchingly, and we might add *aimlessly*, but deeply and minutely, and with a definite object in view, ever keeping every relation of every fact, however remote in their general aspects they may appear to be to each other. One sided views, narrow reasoning, and special conclusions, seldom accomplish much in inductive reasoning. **Wide and comprehensive must be the**

generalization, and well balanced the intellect that can hope for safe and durable results in the broad fields of inquiry every day opening to the present generation of investigators; anatomy, physiology, pathology, chemistry, meteorology, and physical laws, and then the obscure, but at the same time important bearing vital forces exercise upon all these, when brought in relation with the animal economy, must be the familiar implements of the true medical logician of the present day; nothing less than the whole circle of the sciences will be tolerated, because, nothing less than the whole circle of the sciences will complete the chain, and make us feel safe in accepting the teaching from any source. If any weak point remains, the whole is weak, for "in argument as in architecture, no structure is stronger than the weakest part." A chain which has a feeble link, though it may in other parts, be strong enough to moor a universe, is still no stronger than that weak link.

Professor Wright's remarks present the novel recommendation of looking closely into the minute relations of things, and developing their bearings in the aggregate, in great results. At the conclusion of the Report, he remarks—

"In the above report I have spoken of the exanthematous disorders so prevalent last spring, in a manner which, if not altogether novel, is yet sufficiently unusual to excite some discussion. I have spoken of them as liable to originate in certain Thermometric and Hygrometric conditions of the atmosphere. This idea in reference to diseases generally considered contagious, or, at least, infectious in their character, will naturally be deemed to demand some explanation; so, at least, even if I should fail to make out my point, I shall be expected to state precisely what is my position in reference to these diseases. To commence, then, I think it may be easily seen that, whatever may be people's views with regard to their contagious or infectious character, neither is inconsistent with the possibility of an atmospheric origin for their epidemic prevalence. I shall endeavor to show, in other words, that an atmospheric cause may, without contradiction, be supposed to produce disease, which, when produced, may become communicable, either by infection or contagion.

Is not, then, a dry, cold condition of the atmosphere at any rate, calculated to predispose the skin to a morbid condition? The commonest experience shows that under such circumstances the skin does suffer—chapped hands and lips, chilblains, etc., are familiar evidences of this; but the question arises whether the prolonged effect of these influences on the skin may not produce

morbid conditions affecting the system generally? To estimate this question aright, let us consider some of the functions of the cutaneous surface. In treating of the skin as a secreting organ, physiologists have, I think, too much limited their attention to its secretion by the sudoriferous and sebaceous glands. Important as these may be, it seems to me that they are far subordinate to that great system of excretion that depends upon its constant epithelial desquamation: of all products in the human body the solid substance excreted by the exfoliation of the epidermis abounds most in nitrogen, and seems, according to the best analyses, to contain ammonia ready formed in considerable quantities. This being the case, is it not evident that where this process is going on with activity a larger amount of azotised excretion must be effected this way than by all other emunctories put together—the kidneys not excepted? Now there are many evidences that in early spring and summer there is, under ordinary circumstances, an increased activity given to this process. Cutaneous diseases are much more common at this season, the eruptive fevers now under consideration are much more prevalent at this season, than any other, and the analogy of the whole animal creation shows an increased activity in the cutaneous system of nutrition and disintegration—thus we have beasts throwing off their winter coat, as it is called, and the newer and more perfect fur or hair rapidly taking its place, birds moulting and serpents casting their skin, &c.—and can it be doubted that the result of this is the throwing off of various materials which, during the suspension of this function in winter, have accumulated, and would otherwise act as a source of disease? Indeed, the very act of throwing it off seems to constitute a sort of disease, for birds when they moult, horses when they change their coat, are, as is well known, out of condition—the serpent retires to his den to change his skin, and goes through the process more dead than alive. May not these changes be considered as a sort of normal exanthematous fever, from which the animal comes forth with his winter constitution depurated and invigorated for the procreative season? Now, a well known phenomenon in popular pathology is that of spring-sickness; it is looked upon as a thing to be expected that a certain amount of mild indisposition shall take place at this season—indisposition which is expected to yield to the mild medication of herb teas, etc., and probably does not need even this: these popular impressions, however mixed up with error, always contain some truth at the bottom, and the man of true science, though he may scrutinize them strictly, is always too wise to pass them over. If these season sicknesses are less noticed at the present day than in old times, I think that it would still be unphilosophical to reject them as exploded chimeras; they are probably less distinctly marked than formerly, from the fact that advancing civilization, with its increased means in the way of clothing, and firing, and well con-

structed dwellings for moderating the extremes of temperature, has really, to a great extent, equalized the seasons and so partially obliterated those periodic revolutions in the animal economy which have given their pathological characteristics to the different seasons. Still much remains to show that the spring especially is a period of considerable constitutional changes in man as well as the lower animals.

And may not the truth at the bottom of all these general facts and general impressions be, that during the spring certain accumulated materials have to be thrown off which have been retained in the blood, through the partial suspension of this epithelial excretion during the winter? To estimate the probability of this, let us consider rather more in detail the effect of cold weather upon this function. Take, for instance, the simple and common phenomenon of chapped hands, already alluded to. Here, at first sight, the phenomena would seem to suggest rather an increased than a diminished epithelial action; the corium becomes bare, the epidermis roughening and becoming split into chinks. But a slight consideration will serve to show that it is not so much the more rapid disintegration of old tissue which is at work, as the less active development of new. Thus familiar observation shows that where the nutritive forces of the skin are unimpaired, any cause which rapidly removes the disintegrated epidermis, (friction, for instance,) tends, by stimulating the nutritive process, to increase rather than diminish the substance and consistency of that membrane—when, therefore, cold effects an exposure of the *corium* or *cutis vera* it is not by excess of what is removed from above, but through defect of what is supplied from below—in short, from a defective nutrition of the skin; and why this should result from cold is plain. The contractile muscle cells, both in the substance of the skin itself, and those entering into the structure of its arterioles, are caused to contract, cold being their most energetic irritant, and thus the supply of blood diminished, which alone is sufficient to account for a diminution in both its nutritive and excretive functions, growth, that is, and its exfoliation of waste substance. But now, if the plastic material prepared in the system for the nutrition of so large a portion of it as the cutaneous expanse be for several months of the year, to a great extent prevented from subserving that purpose, then, what becomes of this unappropriated material? Here the aphorism of Treviranus seems to have much force, “that every organ and tissue of the body in reference to its nutrition, serves as an excretive organ to the rest of the system.” In the rapid changes which the skin goes through in its normal condition, it is difficult to say which is the more prominent, the function of nutrition or that of disintegration, the two processes being so mutually dependent on each other; and can any one suppose that when so rapid a medium of excretion is from any cause retarded or suppressed, when so large an

amount of material, which being adapted for skin-nutrition, is so far unadapted to the nutrition of any other tissue, is retained in the system, that then no disturbance shall take place in the equilibrium of the organic forces?

Let it even be supposed (which, doubtless, does take place to some extent,) that the matter thus accumulating is disposed of by some other medium of excretion, the secretive functions of the kidney, for instance—yet, even then, it can scarcely be supposed that no pathological result ensues. If, even, we could suppose that the excretion could be performed as perfectly when one organ alone performs its own share of the work, and that of another too, still the very fact of the additional calls upon the vicarious organ, would lead us to anticipate, after awhile, derangements in its functions from an excessive demand upon its exertions, and then of course the evil would be redoubled.

And now we are in a position to appreciate the probable effects of just such a spring as we have been passing through.

As a general thing, the bland and genial warmth of advancing spring, gradual in its progress and tempered with a grateful moisture, is exactly the condition calculated to encourage the resumption of the cutaneous functions, at a season when their suspension could not be continued without evil resulting, the gradual elevation of temperature producing a gradual dilatation of the cutaneous capillary system, and thereby promoting a gradually increased nutrition, while the moisture of the atmosphere prevents the exhalations of the sudorific glands from being carried off too rapidly, and allows them to settle on the cutaneous surface sufficiently to keep it in that state of moisture which is most favorable to the exuviation of the waste products of this nutrition. But instead of the growing warmth and genial showers of our customary spring weather, we have, as above shown, had everything reversed. A few days of unseasonably warm weather in February were succeeded by a wintry coldness and arid drought throughout the entire months of March and April. The results naturally to be expected from these circumstances would be, first of all, that the circulation in the skin would be resumed too suddenly, and in such a manner as to favor inflammation rather than increased nutrition; and, secondly, that it would again be cut off entirely—a second winter, as it were, intervening before the effects of the first were eliminated from the system. Thus, not only is there left in the blood and the system at large, the accumulated material resulting from the suppression of epithelial excretion, but a fresh supply added on account of this second suppression, while the skin itself is already in excited or irritated state, from the incipient resumption of its functions early in February being suddenly arrested by the ensuing cold. Can it be doubted that this abnormal accumulation must be now attended by disease? Any accumulated animal matter in the blood, not normally belonging to its con-

stitution, must eventually, if not excreted, undergo decomposition there, so as to constitute what the modern humoral pathology delights in designating a *blood poison*. Moreover, as the materials of this poison were originally elaborated for the skin, and failed to be so appropriated through a defect of its nutritibility, it is obvious that the skin is their appropriate excreting organ, that their special vital affinity is for that membrane. Here, then, we have a morbid poison seeking elimination through a definite organism, that of the skin, while that structure is in a state of impaired functional activity; and is not the result, necessarily to be anticipated, a morbid excitement of the epithelial process: in other words, a cutaneous eruption accompanied by such constitutional or febrile derangement as is to be expected from the presence of an accumulated and imperfectly eliminated poison in the blood? In other words, have we not shown that all the circumstances with which our population has been surrounded this spring have been favorable to the development of fevers, attended with cutaneous eruptions—the regular exanthematous fevers—that is to say, such as scarlet fever, small-pox and measles? And if we find that, exactly those diseases have prevailed which the considerations we have presented represent as due to the antecedents, then is there not a strong probability that the alleged antecedents have really stood to the results in the relation of cause and effect? I know that the great obstacle to the reception of my conclusions will be the *specific* character of these diseases, as shown by their communicability by infection and contagion, and by their generally securing persons once affected by them from a recurrence of the same disease.

Fortunately it is not necessary for me to enter the intricate field of controversy, to which the mention of these subjects generally leads. My own hypothesis implies the existence of a blood poison, consisting of organic matter undergoing decomposition as the result of atmospheric influences, which I suppose to be the original morbid cause; and, whether it be the theory of infection or contagion, or epidemic diathesis, which my readers may hold and which I, at present, meddle not with, they are at liberty to suppose that this poison in a solid or fluid or gaseous form, or the catalytic process or decomposing force which it gives origin to is communicable, or finally, that the same causes, acting upon different individuals, produce the same effects. My hypothesis is altogether independent of all these opinions and of the controversies to which they have given rise.

Not that I am without my opinions on those subjects; and I will here mention that the aspect which these diseases have assumed in Memphis this spring is well calculated to modify extreme opinions regarding their specific character. The blending of the types of the several exanthemes, the successive development of their characteristics in the same individual during the same attack,

the simultaneous occurrence of the different exanthemes in the same family, seem to point significantly to a generic cause, producing specific symptoms, varying in their character according to the constitutional condition of the subject in which its effects are developed. At any rate, whatever may be the difficulties of the atmospheric hypothesis, (and I am not insensible of their cogency,) an insuperable difficulty exists, on the other hand, with those who hold for specific infection as the only origin for these exanthemes, the question, namely, how did the first case of scarlatina or small-pox or measles originate? I am aware, too, that this mode of dealing with the subject is calculated to unsettle pathological views relating to other specific diseases, Syphilis for instance; and I am prepared for the inference as not indefensible that this scourge of humanity may also have arisen, and may still continue to arise, from a specific and communicable poison indeed, but from one which may be developed without specific infection from the vitiated secretions which arise from abnormally continued irritation of the reproductive organs, accompanied with a want of personal cleanliness, and if this is contested, the question might again be put, "how did the first case of Syphilis arise?" as was asked before regarding the exanthemes; and to show what a difficulty this question really is, in the way of candid believers in its exclusive origin by specific infection, we have only to refer to the portentous theories of its original commencement which some of them have been led to adopt: let one be enough, the revival, namely, of Von Helmont's theory of its being derived from unnatural intercourse with the lower animals.—Vide Acton, p. 241, Am. ed.

But this is not a treatise on Syphilis. I have only mentioned this disease to show that I am not at present unprepared for the extension of my hypothesis to other diseases besides the exanthemes of which I have here been taking especial cognizance."

Croonian Lectures, delivered before the Royal College of Physicians, 1857. By G. OWEN REES, M.D., F.R.S., Physician to, and Lecturer on the Practice of Medicine at Guy's Hospital.

LECTURE II.

ON FREQUENT MICTURITION.

Mr. President—I now come to the consideration of hysteria as a cause of frequent micturition. Much has been said of the practices adopted by the more juvenile of the opposite sex in order to excite the compassion of those around them. While this perverted state of moral feeling prevails it may sometimes happen that our patient complains of too frequent call to pass urine. This may be true or it may be false. Again, if true, it may be attributable to the hysterical condition, or it may be the result of other

and more tangible disease. The task in cases such as these is no easy one. Sometimes we may detect deceit by according completely with the patient, taking her part, as it were, and leading her to believe we are the dupes of her ingenuity. If she be deceiving, her next step will be to encroach on our presumed credulity, and she may describe some fresh symptom which may serve to lead to her detection.

Thus such persons may be known to present pieces of brick to the medical attendant, representing them to be stones passed from the bladder. My friend, Mr. Lonsdale, lately met with such a case. The irritability of the urinary organs will be spoken of as most excessive during the passage of these bodies, and the usual symptoms of calculus will be very graphically given. They do not describe the frequent micturition as being associated with an increased discharge of urine. It is probable we sometimes see only a part of that which is evacuated, but we may generally judge that only a moderate quantity passes, inasmuch as the specific gravity of what we obtain is almost always sufficiently high. Whether these patients be hysterical or insane, or the subjects of hysterical insanity,—if that be the politer term,—it matters little; they are guilty of deliberate mendacity, in order to make others miserable; and there we will leave them, with the remark that these are pseudo cases of frequent micturition, which it is merely necessary to allude to, as part of the history of the subject. Frequent micturition is, however, an occasional concomitant of hysteria. It is not only young girls who may become the subjects of the symptom; it is to be observed in matured and married females, and yields to the ordinary remedies for hysteria in their case as in that of young and unmarried women. Now and then the frequent micturition is caused by the secretion of a large quantity of light urine, that symptom so well known to practitioners. At other times this may not persist. The urine may be nearly natural, but with the hysterical symptoms the bladder becomes irritable.

The true nature of these cases is chiefly to be determined by excluding other causes as productive of frequent micturition, and there is usually but little difficulty in doing this. The hysterical symptoms may not be very prominently shown, but if attention be directed to the point the truth appears plainly enough. A knowledge of previous history is very necessary in these hysterical cases. It happened to me to see a young lady about two years ago, in whom the symptoms of frequent micturition was supposed to depend upon hysteria, but in reality was caused by the presence of a mulberry calculus in the kidney. This may appear an unaccountable error. It was only through the history that we arrived at the truth, and significant as the indication was which her story revealed, still the hysterical condition had so completely distracted the mind from the point, and had been regarded by

those who had seen her as so sufficient in itself to explain all, that even the important symptom of hæmaturia was slighted.

As this case is not an isolated one, I will briefly detail it. The patient was a young lady of fully developed figure and of healthy appearance. Her symptoms were principally those of hysteria. She had loin pain to some extent, but not more than we continually meet with in women. The urine was passed often, but nothing remarkable could be detected in it. The persistence of frequent micturition eventually led to close questioning as to the previous history of this young lady, and it was clearly ascertained that she had passed blood on several occasions some months before. I have since heard of a similar case, in which calculus caused irritability of the bladder and slight hæmaturia, hysterical symptoms being present in a marked degree. I would not have it supposed that I am inclined to connect all hysteria with the presence of calculus in the kidney, but these two cases deserve notice, and will serve to warn practitioners against classing frequent micturition amongst *purely* hysterical symptoms without careful inquiry.

What we, however, see in urinary pathology and its therapeutics is so suggestive that I trust I shall not be regarded as trenching on the field of those who keep the ladies so much to themselves if I offer the results of experience, which is not easily accessible to those who, as obstetric practitioners, may not have made the chemistry of urine an especial study. The connexion existing between the nephritic and uterine branches of the sympathetic are most intimate, but while uterine irritation has been spoken and written of in every possible phase, and while scarce an organ or tissue of the body has escaped the criticism of uterine pathologists, the kidney has by no means received the amount of attention it deserves. I have already mentioned two cases in which calculus existed concurrently with hysterical symptoms, and many cases suggest themselves to my mind, which I am much inclined to believe would have gone far towards establishing the fact that the kidneys are often primarily involved in this affection.

My friend Dr. Lever lately gave me the notes of a case strongly bearing on this point, in which the hysterical symptoms were very severe. Death took place by coma, and post-mortem examination showed the kidneys advanced in disease. The poor girl died with all the symptoms of uræmia. Her blood, poisoned by admixture with urinous materials, produced death precisely as it occurs in morbus Brightii.

The next cause productive of the disease under consideration often occurs in connexion with hysteria, but not necessarily so. It consists in the presence of hardened feces in the rectum. Sir Benjamin Brodie directed attention to the point many years since, and urged the propriety of examining the rectum in order to remove the indurated mass. Purgatives are unavailing, the feces

requiring removal by an instrument. I was consulted in a case of this kind some three or four years ago, in which the cure was effected by mechanical means. The relief was immediate. There may be occasional diarrhoea, but the rectum contains hardened faeces notwithstanding, and the motions find their way by the sides of the concrete mass.

Another cause for frequent micturition exists apparently in a state of skin brought about by the application of cold to the surface. I have seen this produced by an insufficiency of bed-clothing. The case puzzled me much at first. I have known the same result to follow from a married man taking it into his head to sleep alone, having previously slept in the same bed with his wife. Again, I have observed the result in persons exposed to the influence of our colder climate after residence in the East. These cases occur in irritable constitutions, and the skin is generally delicate and thin, but otherwise the health may be perfect. It would appear here that the kidney takes on a vicarious action, owing to the spasm of the cutaneous secreting surface, and irritability of the bladder results as a consequence, in an increased quantity of pale urine being passed.

Amongst causes for frequent micturition, we find diabetes enumerated, and it certainly may become a symptom of the disease. The quantity passed on each occasion is, however, so large, compared with that characterizing most of the other states I have described, that the patient's attention is attracted by the large discharge, as well as by the frequent call, and the former is related as the more prominent symptom. This should lead at once to the examination of the urine for sugar, and if that be *not* found, we may perhaps determine the presence of insipid diabetes by the low specific gravity, the increased flow, great thirst, and other characteristic symptoms. It does, however, now and then happen in diabetes, that frequent call to pass urine has been the symptom most noticed by the patient, and then if due care be not taken, the practitioner is a long time led astray. Cases such as these by no means infrequently occur. They are sometimes treated as dependent on the gouty diathesis, an uric acid deposit having attracted the attention of the medical attendant. Treatment is then persevered in until all the more aggravated symptoms of diabetes appear. The early detection of this disease, which is so important for its relief, is thus prevented.

I now have to speak of two forms of cancerous affection which may produce frequent micturition—viz., malignant disease of the kidney and of the bladder. These two states are characterized by hæmaturia. It sometimes happens that the irritability of the bladder is so great when the kidney alone is involved, that this sympathetic affection may be mistaken for the primary disease, and the nephritic mischief entirely overlooked. What I would wish to enforce is, that these two symptoms, hæmaturia and frequent micturition, taken

together, should be regarded (the prostate being excluded) as indicating calculus or malignant disease, and that either the kidney or the bladder may be in fault. The indications of cystitis, shown by the urine when calculus exists, have been already dwelt upon; but when malignant disease is present, there may be none of these. The urine may be clear, or may only contain such a small quantity of blood that very careful examination is requisite in order to detect it by the naked eye. Here the kidney might be considered in fault, and the diagnosis is not always to be made.

If we have a tumour of the abdomen over the region of the kidney, then we may safely diagnose that organ involved; but this indication is not always afforded us, and then we should examine the bladder very carefully. If, on sounding, hæmorrhage occur to an extent exceeding that usually produced by exploration, there is most likely a growth on the mucous surface of the bladder.

Before leaving this part of my subject, I must say a word or two respecting the seat of tumour in these forms of disease. First, with regard to the kidney. It is necessary to guard against being led astray by the tumour appearing in a position somewhat removed from that in which it ordinarily exists. Nephritic enlargement sometimes occurs at the upper portion of a kidney, and in abscess of the organ especially, there is often considerable bulging upwards. This may occur to such an extent that the tumour eventually may be felt in that part of the abdomen usually occupied by the liver, and in malignant affections also, if the right kidney be involved, the tumour may exist over nearly the whole of the right hypochondriac region. An able paper will be found in the "Gay's Hospital Reports," in which Dr. Bright has given sketches illustrative of this fact.

As regards the production of frequent micturition by malignant disease of the bladder, the tumour must be situated near the neck of the organ in order to cause the symptom. I have had two cases within the last few years especially illustrative of this point. In the one, so little inconvenience was felt that had it not been for the microscopical indications of the urine, I should have inevitably mistaken the disease. There was no increased desire to pass urine, and no pain; and hæmaturia was only an occasional symptom. Post-mortem examination showed the advantage to be derived from microscopic research, the diagnosis being verified by the presence of a large mass of villous growth on the fundus of the bladder. The situation of the tumour, far removed from the neck of the organ, explained the absence of the symptom of frequent micturition. In the other case, a tumour of the same kind existed near the neck of the bladder, and the irritation was most torturing. The symptoms otherwise exactly resembled those of the former case. There was the same hæmorrhage after sounding, and hæmaturia was of very frequent occurrence. I have spoken

of certain microscopical appearances which determined my diagnosis: these were merely such as I have detailed in former lectures, consisting in the presence of those corpuscles or cells which are found in the villous growths from mucous membranes, and which, when they can be satisfactorily determined to exist in the urine, are always most significant.

It has not yet fallen to my lot to demonstrate the presence of any peculiar structures when the kidney alone has been affected; but the subject is somewhat novel, and it is far too early to propose the discovery of such cells as a positive proof that the bladder, and not the kidney, must necessarily be the part involved in the disease.

Before leaving the analytical symptomatology of frequent micturition, I would speak of the influence of habit and of nervousness in continuing the symptom, even after the obvious causes producing it are removed. With regard to habit, it is in some cases of the greatest importance to inform the patient of his position, and instruct him to restrain himself as much as possible. If he will do this, his malady becomes of necessity of shorter duration. We often find the subjects of this symptom acquainted with every corner suitable for the relief of their wants. They are reminded of their malady on approaching their wonted haunts. An effort is required to pass them, and it is well to instruct such patients to make a point of doing so if they possibly can. The nervous feeling which arises in sufferers from this infirmity when they find themselves in company is very distressing. They are certain to feel the inclination when there is the greatest difficulty in gratifying it. They consequently refuse to go into society. They are, perhaps, urged to do so; they suffer great misery, and their complaint becomes aggravated. This should never be allowed. Let them avoid company, and as their complaint improves they get more courage; and there is no fear of a return of this nervousness, except they again become the subjects of those physical ailments which originated the disease.

This closes the list of causes for frequent micturition which I have proposed to consider, and I shall next proceed to remark on the treatment advisable in some of the more important diseases giving rise to the symptom.

First, with respect to the inflammatory conditions—viz., cystitis, caused by calculus and by retained secretion, or arising after gonorrhœa. I would beg your indulgence while I proceed to premise the more practical part of my remarks by considering the anatomical conditions of the lining membrane of the bladder, and the peculiarity of its position when it becomes the subject of inflammation. In connexion with this subject it is important to reflect on the effects of disease as observed in the mucous membranes generally.

The mucous membrane lining the mouth, fauces and œsophagus,

and extending to the anus, is known to secrete a mucus in disease, varying in quantity and quality. Its physical and other characters are easily determined, for the reason that we have constant opportunity of separating it from admixture with the solids excreted from the canal. It is not necessarily macerated, nor more or less dissolved in the feces, nor is the character of the latter changed in such manner by the presence of mucus but that we can make due allowance for its presence, and separate in our minds the indications afforded by each. The other part of the gastro-pulmonary mucous membrane, descending into the respiratory canals, secretes, under irritation, a mucus which we can collect nearly at all times in a pure and unmixed state.

Now, neither of the above conditions apply to the urinary mucous membrane. The secretion from the mucous surface of the bladder, and from the whole of the urinary tubes, mixes with and alters the secretion of the kidney. The urine is acted upon and changed by the various results of inflammation, which may be poured out by the membrane, and it is the effect produced on the urine by the fluids resulting from inflammation that it is important for us to remember.

There has been great carelessness shown on this point. The urine has been regarded as not very materially changed by the secretion of the mucous surfaces lining the passages, and the possible modification effected in its constitution during its passage from the kidney to the orifice of the urethra has received but little consideration. An acid and an alkaline state of urine, as evacuated from the urethra, have been too much regarded as indicative of the states of those urines as secreted by the kidney.

Whole pages have been devoted to the explanation of the alkalinity of urine and the cause sought for in presumed states of the general system, while there is little doubt that the kidney has been all the while secreting a strongly acid fluid, which has subsequently become alkaline owing to admixture with the secretion of the inflamed mucous surface. For many years there has been a great horror of alkaline urine, because it is so often connected with advanced disease of the urinary organs; and this fear even extends to the rejection of remedies capable of inducing alkalinity. We hear it said, "We must take care not to make the urine alkaline; if we do we shall cause phosphatic disease." Now I defy any one to succeed in doing this. He may administer alkalies for months, and he shall not necessarily cause a deposit of the earthy phosphates. The urine may remain alkaline during all that time, but the effect so described will not take place. All he will do will be to cause the excretion of an urine depositing earthy phosphates *on boiling* (a necessary result of rendering urine even slightly alkaline), but the earthy salts remain dissolved unless a boiling temperature be applied, and they will not be present in more than natural proportion.

Having taken the opportunity in former lectures of bringing these views before the notice of the profession, I shall not now make any extended notice of the subject further than to refer my readers to the facts and arguments adduced in support of the power possessed by the mucous membrane of the bladder, when inflamed, to neutralize and render alkaline the urine which has been secreted of its full degree of acidity.

The fact that by alkaline treatment we can often succeed in obtaining an acid urine from the urethra when it has previously been of alkaline reaction, is in itself almost a positive proof that the mucous membrane has produced the alkalinity of disease, the fact being utterly inexplicable on any other theory. Alkalies administered in small doses, so that the acidity of the urine, as secreted by the kidney, is only partially destroyed, will, as the mucous membrane becomes less inflamed, eventually cause a faintly acid urine to pass from the urethra; and when the remedy is withdrawn, the urine may be observed of its natural acidity. This, too, happens in cases where acid remedies have entirely failed to afford relief.

After these observations, it will not be matter for surprise that I should speak strongly in favour of alkaline remedies in all cases of inflamed bladder. And, first, let us consider what benefit we may hope to obtain from their use when cystitis is dependent on the presence of calculus. In this form of disease, the mucous membrane being subjected to mechanical irritation, we cannot hope to do much for our patient by medicines. The removal of a calculus, however, may be performed at a favourable or at an unfavourable time; and therapeutics are in this way of much service. The bladder is so circumstanced that its inflamed mucous membrane is constantly pouring out large quantities of secretion, in order to protect it from injury. This irritation once set up by the calculus, is aggravated by the presence of normally acid urine; and so long as the secretion of the kidney possesses an acid reaction, so long will the evil be aggravated. It might be imagined that because the urine is naturally acid the mucous membrane ought to find acidity more genial than alkalinity. This is, doubtless, true in health, but if inflammation occur, the case is different; and I would mention, in illustration of this, the familiar instance of gonorrhoea—a disease in which it is well known the mucous membrane being inflamed, great relief is obtained by rendering the urine alkaline. The alkaline treatment is, then, advisable in all inflamed states of the urinary mucous surfaces; and the dread of inducing the phosphatic diathesis is a mere bugbear which, in my belief, by interfering with correct therapeutics, has cruelly added to the sufferings of humanity.

In my lectures of last year, I described the plan I adopt in order to render the urine alkaline, as secreted by the kidney—viz., the administration of the neutral salts of vegetable acids. These

enter the urine very rapidly as supercarbonates, and according as the bowels require to be acted on or not, I administer the more or less purgative forms of such salts. The citrate of potash answers remarkably well merely to produce an alkaline urine, and the tartrate may be added in due proportion two or three times during the day, should it be necessary to relieve constipation. This plan, with the addition of anodynes at night, is all we can well do in cases of calculus, and the bladder will sometimes be so relieved by it, that patients may lose most of their symptoms, while those remaining will be greatly mitigated.

There is a point connected with the administration of these neutral salts well worthy of attention. The decomposition occurring after they enter the stomach being productive of a supercarbonate of the alkaline base in the urine, we produce a fluid in the bladder possessing peculiar chemical qualities. Thus while, on the one hand, uric acid is soluble in such a menstruum, we also know that the earthy phosphates will dissolve in it—a double property long sought for by those who would effect the solution of calculi in the bladder.

I do not put this forward as the discovery of a means of effecting the solution of vesical calculi; but it is impossible to shut one's eyes to the fact, that an urine kept constantly under such chemical conditions must inevitably be exercising a solvent action, both on the uric and phosphatic ingredients of calculi, every minute of the day. The plan, moreover, is one which renders the urine soothing to the mucous membrane, and this is an important indication to answer. I would entreat my surgical brethren who are so constantly treating calculous cases, to use the alkaline citrates freely. It is to them we must look for results as to the efficacy of the remedy in exerting this solvent action on urinary concretions. Of the great value of the plan, after the operation of crushing, I am perfectly satisfied.

I shall not enter on a consideration of the methods which have been proposed at different times to disintegrate calculi while in the bladder by electrical decomposition. These propositions have for the most part originated with physicians. The late learned President of this College was the first to make allusion to the possibility of this being effected. Since he wrote others have taken up the subject. Thus we find in Dr. Pereira's "*Materia Medica*," 3rd edition, p. 47, the following statement:—"Bonnet suggested that the bladder should be injected with a solution of nitrate of potash, and the calculus subjected to the action of electricity in this liquid, in order that the nitrate may be decomposed into nitric acid and potash; the former of which, it was suggested, would dissolve the phosphates, while the latter would dissolve the uric acid and urate of ammonia."

The above view has since been taken by Dr. Bence Jones, and will be found in a paper lately published in the "*Royal Transac-*

tions." For my own part, though it may seem presumptuous to fix the limit beyond which human ingenuity is not to step, yet there appears so much which is opposed to the possibility of success when contemplating such proposals, that I have no hope whatever of their adoption leading to the desired result.

As regards the treatment of cystitis following gonorrhoea, I have nothing more to say than that the alkaline plan exceeds all others in efficacy. The combination of hyoscyamus with citrate of potash, in half-drachm or scruple doses, repeated every four hours, will generally produce relief. The dose of hyoscyamus must be moderately small, as it is to be so frequently repeated, but twenty minims of the tincture will not be found too much. If inflammation run high, this plan must be combined with the abstraction of blood by leeches or cupping.

The treatment of cystitis, as produced by paralysis, depends much upon surgical aid. The bladder should be emptied by the catheter, and the *whole* of the urine being thus drawn off, the operation may be in like manner again repeated after a few hours. The viscus, thus freed from the presence of an irritating fluid, often recovers its natural condition; but while this is doing we always improve the condition of the inflamed mucous membrane, by keeping the secreted urine alkaline, and the citrate of potash may be advantageously administered at intervals. Much has been said of the benefit derived from strychnia and the various preparations of nux vomica, in assisting the paralysed bladder to recover itself. Inasmuch as strychnia is an excellent tonic, it may sometimes do good in judicious hands; but I am not much inclined to believe in its possessing that power over the bladder of which some have spoken so highly.

With respect to the second class of causes productive of frequent micturition, many of them consist, as I have already shown, in the presence of diseases bearing a very general relation to therapeutics. Thus diabetes insipidus and mellitus, and albuminuria frequently cause the symptom. Of these diseases I need only remark, that the remedies best suited to their relief are those which will most benefit the bladder, by lessening the discharge of urine, on the one hand, and, on the other, decreasing the proportion of albumen contained in it. The other causes described, consisting in the presence of hardened faeces in the rectum, and inertness of skin from exposure to cold, need no remark, the treatment being sufficiently obvious. I would say a few words, however, as to the management of calculus in the kidney, when it is keeping up sympathetic bladder irritation. When we have a patient in this plight, we hope for the passage of the calculus as the most desirable termination of the case, and our treatment should therefore apply to the fulfilment of that end. How is this to be effected? Our object must be more especially to lessen spasm, and to prevent the concretion increasing in size. Alkaline treatment is here

most valuable. The citrate and tartrate of potash or soda, exhibited at intervals during the day, are not only theoretically indicated as neutralisers of the urine, the acidity of which must irritate the inflamed renal structure, but the action of these remedies, in producing a supercarbonate of the alkali in the urine, is just what we require in order to dissolve the uric acid or phosphatic earthy deposit, and to prevent its increase. I have now been in the habit of recommending this treatment for some few years, and, where it has been carefully carried out, have been much gratified with the result. In several cases it has appeared to facilitate the expulsion of the concretion; and in one or two instances, where the urine has been carefully watched, there has been no return of the disease.

In inveterate uric diathesis, where calculi are constantly forming, this plan of treatment may not always gain credit. The calculi already formed may come down as before, and it may not be easy to impress our patients with the soundness of our views when they observe as many calculi as ever entering their urinary canals. The benefit has, however, been to me sufficiently obvious, and I am convinced that it is the only true mode of combating the calculous tendency.

When speaking of calculus in the bladder, I alluded to the chemical effects produced by the alkaline supercarbonates, and I may here relate the manner in which any one can assure himself, without difficulty, of the power they possess of effecting the solution of earthy phosphates. I need say nothing of their action on uric acid.

If we take recently precipitated earthy phosphate, and wash it, and then pour upon it a solution of bicarbonate of soda, allowing digestion to go on in the cold, with occasional shaking, we find that the bicarbonate will dissolve a very notable quantity of the phosphate. This may be shown by boiling the filtered solution, when the earthy salt will fall as a precipitate.

I have next to notice the treatment of hysterical subjects complaining of frequent micturition. Of the pseudo-cases described, little need be said. They require moral management, and some diversity of opinion may exist as to the best course to pursue. Were I to advise, I should say, when you have satisfied yourself that they are deceiving you, tell them privately that they are doing so, and advise them to get out of the scrape by gradually acknowledging themselves cured by remedies which you propose to administer. In this way they are saved from exposure, and by thus compounding with their mendacity, they may be induced to give up such practices for the future. Of course, when this plan is adopted, it is right some responsible member of the family should be made privy to the scheme and the *rationale* of its action.

If hysteria be really complicated with irritable bladder, we have the means of doing much good. When describing this state, I

alluded to the fact that it was not necessary a large flow of urine should occur, in order to produce the symptom of frequent micturition. It would appear that in some cases the skin refuses to act altogether, and nearly the whole of the water discharged from the system has to find its way through the kidney. This may be owing to the feeble and irregular state of the circulation observed in hysteria, and here the irritability may be removed by tonics and stimulants; and when the skin begins to act, as a result of the restoration of action to the extreme vessels, the symptom ceases.

In other cases less aggravated, it would appear that though the skin maintains the power of excreting water, it loses that amount of energy necessary to render it an emunctory of the more solid constituents of the blood. In this way, the excretion of extractive and other matters is thrown more fully on the kidney, and the urine is apt to become abnormally acid. Here we have an important indication to fulfil, and it becomes necessary, while we administer tonics, that we should render the urine of an unirritating character. The use of the citrate or tartrate of potash or soda will here also do all we require, and they may be advantageously administered in combination with antispasmodics. Of these, assafoetida is perhaps the best. It is a disagreeable remedy, it is true, but great benefit accrues from its administration. The cutaneous surface, as we well know, is rendered active during its ingestion, the perspiration possessing the odour of the drug in a marked degree. The kidney, under this treatment, has less acid to excrete, and the irritability of the mucous surfaces is thus lessened. The best form for this unpalatable drug is in pill, and five grains may be given three times a day with each dose of the saline remedy.

[*London Lancet.*

New Views on the Physiology of the Large Intestine. By M. F. COLBY, M. A., M. D., etc., Stanstead, C. E.

It is now more than eighteen months since I discovered the error in the received physiology of the function of the large intestine, particularly in that part of it called descending Colon, Sigmoid flexure and rectum. Every day's observation since has confirmed me in the correctness of my views. Although I have not been able to engage in general practice, I have had numerous opportunities of testing them as to their bearing on pathology. The knowledge of the true function of the descending bowel does away with all the uncertainty complained of by medical men as to the effect of cathartics, and more particularly of enemas, in many cases. A discussion took place in the Westminster Medical Society in 1838, which is reported in the *London Lancet*. The discussion developed one fact, that there was a consciousness among all present that there was something not satisfactory in the received

physiology; which led off the question to the anatomists present, whether there was anything in the anatomical structure of the descending bowel which could operate as a valve?

I can demonstrate the received physiology of the function of the descending bowel to be untenable, and that it implies the charge that the Creator has left a defect in the organization of a particular part, which renders it inadequate to the performance of the function assigned it. My new physiological doctrine recognizes two distinct apparatuses, each possessing peculiar and distinct functions over and above what is recognized by the old system. These functions were supposed to pertain to that apparatus called the large intestine, and heretofore assigned to the function of organic life, assisted by the voluntary co-operation of the abdominal muscles.

As to the purport of my new physiological doctrine, I quote from lectures which I am preparing illustrative of the subject, the following recapitulation:—

1st. I assume that the organic function of the colon ceases at its left transverse extremity.

2nd. That the portion called descending colon and sigmoid flexure has a separate and independent function.

3rd. That this portion of the bowels is anatomically inadequate to the performance of the function heretofore assigned it.

4th. That this portion constitutes the link between the animal and the organic life. That it is possessed of both animal sensibility and contractility to such an extent as to entitle its functions to be considered those of animal life.

5th. That although it is to a certain extent subject to the will, and can be brought into action at any moment by it, yet it has an independent instinctive life which gives it an influence and a power which neither its organic or its animal life could give it.

6th. I assume the name of *curator* as proper to express its function; and as it is a dualite acting under its instinctive life, at times in a separate capacity, I give the name *curator superior* to that portion above the superior spinous process of the ileum, and which for the time is devoted to the functions of organic life; and *curator inferior* to the portion below, usually called sigmoid flexure—this for the time being devoted to the functions of animal life.

7th. That the *curator*, when acting as a unit, occupies the post of observation between the two lives. That it takes cognizance of the time when the digestion and the nutritive absorption is completed in the small intestine; that it then opens the ileo-colic valve, and at the same time by a suctive and expansive action it takes the fecal matter from the transverse colon and conveys it to the rectum, which it aids the levator ani muscles to raise, and by a divergent action of its two longitudinal muscles it opens to receive the same. The *curator* by its instinctive power, recognises the fitness of the rectum to receive and expel the fecal matter simul-

taneous to the opening of the ileo-colic valve; it also at the same time brings into action the abdominal muscles, by which the contents of the small intestine are pressed forward to supply the place of the refuse matter removed from the colon. Its office is therefore not only prehensile in taking the fæcal matter from the transverse colon and conveying it to the rectum; but it exercises the conservative function of keeping the ileo-colic valve closed till such a time as the absorption of all nutritive matter from the contents of the small intestine renders its closure no longer necessary.

8th. That the rectum is part of an apparatus which I call rectal, and which is wholly under the domain of the will; that it exercises the function of defæcation, and aids in that of urination and parturition. In its anatomical structure it is analagous to that of the upper part of the digestive tube with the difference of the reversion of the sphincters. It consists of the strongest muscular portion of the bowel; the rectum, with its muscles; the two sphincter, the levator ani, the coccygei, etc. The same looseness of the cellular tissue, which connects the muscular coat of the cesophagus, is found between these coats of the rectum.

9th. That the power of the will extends over that part of the digestive tube which extends from the mouth to within two or three inches of the cardiac orifice of the stomach; so also the power of the will extends from the external sphincter ani to within two or three inches of the left transverse extremity of the colon.

10th. That the rectum in that abnormal state which results from phlogosis of its muscular coat, has its contractility exalted so as to cause it to act antagonistically to the *curator*. This is the most frequent cause of constipation and its consequence. When this contractility becomes spasmodic this resistance leaves the *curator* to mechanical forces—hence results accumulations and distension of its weakened side walls. It is this abnormal state of the most sensitive part of the digestive tube which fills the hospitals with the insane. It is also in this state that the *curator*, by its instinctive life, acts as a dualite by a peculiar transposition which gives it a great power in overcoming the resistance of the rectum.

11th. The ileo-colic valve may have its functions suspended by local disease, as well as by peritoneal inflammation; but the most frequent cause is the suspension of the function of the *curator*, which may arise from antagonism from the abnormal state of the rectum, or from a phlogosed state of its own mucous membrane. A sudden closure of the valve would cause tympanitis, ileus or strangulated hernia. A weakened or too active state of the valve would result in emaciation from the premature passing of the nutritive matter.—[*Montreal Medical Chronicle*.

On the Use and Abuse of Pessaries in Prolapsus. By Dr. GIBSON.

Of all the displacements of the uterus, prolapsus is unquestionably the most common. We may go further, and say, that of all diseases of married women, prolapsus uteri is the most frequent. Nevertheless, it is only where the displacement is great that much inconvenience is felt, as a general rule; and usually the prolapsus has been in existence a considerable period before the descending uterus has advanced far. Prolapsus vaginæ is not a common disease, without a greater or less amount of descent of the uterus, and probably never occurs extensively without displacement of the bladder, or rectum, or both. When the uterus has descended from its position at the brim of the pelvis, the abdominal contents press upon the organ as they did before its descent, and the pressure of the abdominal muscles is rather increased than the contrary. Vaginal cystocele and vaginal rectocele are almost invariably associated with tumors, and as the vaginal prolapse increases, the cul de sac (formed by the rectum or the bladder, as the case may be) is also increased, and ultimately it becomes difficult to empty the rectum or the bladder completely. Hence it is palpable that the tendency of these displacements is from bad to worse. The facility with which the early progress of prolapsus uteri may be checked by pessaries and the like, has undoubtedly exercised a baneful influence upon the study and treatment of the disease, whilst with many practitioners the unhappy results of the indiscriminate employment of the pessary have had the effect of removing this instrument from their practice altogether; and I venture to submit, that the indiscriminate use of the pessary is greatly more injurious than its disuse altogether. One bad consequence of the use of the pessary is the amount of irritation set up by its persistent pressure—irritation in the walls of the vagina, in the bladder, and in the rectum. Another is the expansion of the vagina consequent upon its continued pressure; from hence results excessive dilatation of the vaginal tube, relaxation of its coats, excoriation, leucorrhœa, &c., &c. Another effect, and often the most serious of all, is the pressure of the pessary upon the os and cervix uteri; hence the production here of inflammation, ulceration, hemorrhage, and a whole host of evils. Still it is undoubtedly true that, by careful management, the pessary is a most useful instrument. I recommend a pessary, which, I think, will obviate many of the objections urged against its use—light, clean, compressible, cheap—the vulcanized india-rubber ball, used as a toy by children, having a peg at the aperture and a loop for easy removal. This, with a well-adapted bandage externally, will relieve very many cases of prolapsus. An excellent pessary is made of sponge, with a loop of tape passed through it for its easy withdrawal. It should be somewhat excavated before and behind, and may be (where large size is a great objection in introduction,)

dipped in a solution of gum, and compressed by tape or twine, as in the ordinary manufacture of the sponge tent. When dry, and the compressing tape or twine removed, and the surface smoothed with a sharp knife or scissors, it is duly oiled, and passed into the required position into the vagina. The medicated pessary is much neglected, and may be made to fulfil very many indications; indeed it is self-evident that the persistent application of any given medicinal agent must be vastly more influential than the brief application of such agent by way of injection, the ordinary form of application. The sponge pessary may in this wise serve a double purpose. I say nothing of recumbent posture, cold sponging, or bathing, food, air, exercise, tonics, aperients, &c., my experience in these matters differing little from that of almost all modern writers upon the subjects under consideration. My experience of the use of caustics—chiefly nitrate of silver—to the walls of the vagina, is not satisfactory; in mild cases they are, for the most part, not indicated, and in the severe forms they appear to me unequal to the requirements of the cases. I have in a few cases applied solutions of iodine in chloroform, ether, &c., to the vaginal surface, but here also I have not met with any commendable success.

Everything considered then—the progressive tendency of the diseases from bad to worse—the acknowledged difficulty in their treatment, their frequency, &c.—it becomes desirable to know whether other means, beyond those ordinarily employed, are not to be found, which shall relieve or cure those forms of disease which have resisted ordinary treatment. The agency of the knife has not had fair scope, and this principally from two causes. 1. The repugnance of the patient and the practitioner to such active treatment of these delicate organs. 2. The possible destruction of these organs as agents in copulation and parturition. The first objection need not be combated here by me; and the second is more ideal than real. It is, indeed, true that the passages have been extensively interfered with, as in the case to which I shall, in a moment, direct your particular attention. But it is also true, that in many instances well fitted for operative interference, the genital canal will admit of very extensive contraction without detriment, or with little detriment to copulation or parturition—that these objections very often do not hold, as in the aged and in the widowed—and that the distress of the disease is often so great, that copulation and parturition are entirely out of the question.

Operative interference may be, and has been, varied much by the caprice of the operator, or the requirements of the patient; but it may be stated, generally, that the aim of operators, hitherto, has been to produce contraction in some part of the genital canal. Dieffenbach removed an oval piece of mucous membrane from the side of the vagina, and brought the edges of the wound together by sutures. Baker Brown performed a somewhat similar opera-

tion, but on a smaller scale—and then, in addition, pares the edges of the labiæ inferiorly, and brings the raw surfaces together. The latter part of Baker Brown's operation has been alone performed; and all have been attended with a measure of success. I have performed two operations with the knife and ligature, for the relief of these affections. One, which has been performed by many others, consists of removing strips of mucous membrane from the sides and back of the vagina, and bringing and sustaining the edges of the wounds in contact, by means of sutures. This operation has been successful with me, but I have only performed it once.

The operation to which I desire particularly to direct attention, has not been, so far as I am aware, performed by any person except myself. The patient had suffered for sixteen years from prolapsus uteri, and for several years, from vaginal cystocele and rectocele, and had undergone treatment of various kinds, from time to time. Moreover, a fibrous-pedicated tumor, one inch and a half in length, was found attached to the posterior lip of the os uteri; this was easily removed by ligature and the bistoury. The patient was afterwards confined to the recumbent posture for a few days, and then the operation for the cure of the prolapsus was performed. The patient being placed in the ordinary position for lithotomy, and the genital canal fully exposed, an incision was carried from the medium line posteriorly (about two inches and a half above the posterior labial commissure) forward, beneath the arch of the pubis, to the margin of the labium anteriorly on each side; from these points downwards the vagina and vulva were completely denuded of mucous membrane by a careful dissection with the scalpel. This part of the operation being satisfactorily completed, three interrupted sutures brought and retained the lateral halves of the upper lines of incision together. Two other interrupted sutures were inserted into the anterior margin of the denuded surfaces, whilst three deeply-placed quill sutures kept the lateral masses firmly in contact. The patient was then removed to bed, and a mild opiate given.

The urine was regularly drawn off twice a day for the first ten days. The bowels were acted upon by enema on the third day. Considerable inflammation resulted from the operation, but ablation with warm water, injection of the vagina by means of a syringe and catheter with warm water, a rigid observance of the horizontal position, and simple food, were found equal to the requirements of the case. The first suture was removed on the seventh day, and on every second and third day from this date another suture was removed. The patient rose from her bed on or about the twenty-first day, and gradually, from this time, assumed the active duties required of her by her household. At the present hour she is quite well.—[*Newcastle and Gateshead Path. Transactions*, and *Ranking's Abstract*.]

On the Preparation and Therapeutical Employment of Subcarbonate of Bismuth.

The following is the mode of preparation of the subcarbonate of Bismuth described by M. Hannon, Professor at the University of Brussels. The bismuth is first purified by melting this metal in powder with ten times its weight of powdered nitre. After cooling, the metal is again powdered and mixed with ten times its weight of nitre, and after a second fusion the bismuth may be considered as entirely free from the arseniurets and sulphurets which it almost always contains. Then three parts of nitric acid are put into a retort, and one part of pure bismuth is added. When the reaction is complete, about a third of the liquid is evaporated, then the solution is poured drop by drop into a solution of carbonate of soda, and a white precipitate is obtained, which is subcarbonate of bismuth. The precipitate, after having been washed five or six times with distilled water, is thrown upon a filter, and washed again to remove the last traces of carbonate of soda. It should be preserved in well-stopped bottles. The physiological properties of the salts of bismuth are very little known, for the simple reason that the subnitrate is the only salt which has been employed in medicine. The operation even of this salt is not well understood, as its insolubility offers an obstacle to the observation of the physiological phenomena which might have been observed in the other salts of bismuth, such as the citrate, the tartrate, or the carbonate. It is also the insolubility of the subnitrate which renders it inefficient in the greater part of the cases in which it is indicated; and it also occasionally produces a very inconvenient sensation of weight at the stomach. The subcarbonate is soluble in the gastric juice, its action is rapid, it produces no sensation of weight at the stomach, it rarely constipates, colors the stools less than the subnitrate, and may be employed for a long time without oppressing the stomach. The action of the subcarbonate appears to be sedative during the first days of its employment, and subsequently to excite all the phenomena which result from the action of the tonics.

As to its therapeutical action, it may be noted that all cases of gastralgia consecutive upon phlegmasia of the digestive passages, cases in which the tongue is red and pointed, and cases in which the digestion is laborious and accompanied with putrid or acid eructations, or in which there is a tendency to diarrhoea or spasmodic vomiting, demand the employment of the subcarbonate of bismuth. This salt is also required in the vomiting of children, whether caused by dentition or succeeding to frequent fits of indigestion, and in the diarrhoea of weak children, especially when occurring at the time of weaning. One great advantage possessed by the subcarbonate of bismuth is, that it neutralizes the acids in excess which are found in the stomach. The subnitrate, as is well

known, fails always in this respect. In all the cases where the subcarbonate has been taken, the pain in the digestive passages is first found to disappear; then the eructations cease, together with the vomiting or diarrhoea; the digestion becomes less and less laborious, the tongue gradually receives its normal form and color; and if the use of the subcarbonate is continued, the appetite increases from day to day, the yellow tint of the countenance disappears, and the face becomes colored at the same time as it ceases to be shrivelled.

The subcarbonate of bismuth is perfectly insipid, and excites no repugnance. It is given before meals. Adults take it in a little water, and children in honey. It may also be made into lozenges. The dose for adults is from one to three grammes, taken three times a day in increasing doses.—[*Bulletin de Thérapeutique*, and *British and Foreign Med. Chir. Rev.*

On a Case of Diabetes treated by the Use of Rennet. By Dr. IVERSEN.

Dr. Iversen relates the case of a patient, in the lower class of life, who had well marked diabetes, who was treated with rennet, and the details of whose case were carefully recorded day by day. As all the usual plans of treatment had been unsuccessful before the patient's admission into the hospital under Dr. Iversen's care, he made an experiment of the rennet treatment. In order to obtain as accurate a result as possible, it was determined, in the beginning of the treatment, not to alter the diet of the patient, except to recommend the greatest possible abstinence from drinking. By the table prepared by Dr. Iversen, the treatment seems to have been successful in diminishing the quantity of sugar in the urine; but from some circumstances which are not explained, the patient was seized suddenly during the progress of the case with fainting, followed by spasms, ending in death. No post-mortem examination was permitted, and the case is therefore imperfect. Notwithstanding the unfortunate result, Dr. Iversen considers that the constant diminution of the urine, both in its actual quantity and in its saccharine ingredient, was very remarkable. He shows that in the first four days, during which the patient took no medicine, the average quantity of urine voided, amounted to 10.108 cubic centimetres. In the following period of seven days, during which she took the rennet, the quantity of urine reached only 7.927 cubic centimetres, with a quantity of sugar amounting to 324 grammes. In the next five days, during which she took the rennet in combination with phosphate of soda, the average daily quantity of urine sank to 6.988 centimetres, with 250.317 grammes of sugar. The patient herself attributed to the rennet the power of allaying in some measure the burning thirst which she experienced.—[*Archiv. des Vereins für Gemeinschaftliche Arbeiten*, and *Th.*

In selecting the following short report, we call attention to the fact that a lesion of a nervous centre here produces symptoms of chorea. This case rather corroborates our remarks at the end of Dr. W. C. Brandon's case in the original department of this number of our Journal, page 585. Since Dr. Brandon's case, with our remarks, have been in print, we have had the opportunity of witnessing a case resembling his in many points, and especially in the Chronic symptoms.

Miss F., aged about 68 years, fell from her bed on the morning of the 11th inst. Dr. R. Campbell visited her some hours after: found her perfectly rational, and able to give an account of the accident in intervals of spasms. Her head was bent forcibly forward and rested upon her knees. She was convulsed almost unintermittingly in her arms and lower extremities, but more violently in the left arm. There was a severe contusion on the left side of her head and face.

By the use of sedatives and quinine with brandy, the general spasmodic symptoms were arrested. She became apparently much relieved, ate with appetite, and conversed rationally and composedly, but the spasmodic action of the left arm never abated, *except during sleep*, from the time of her fall till her death, which occurred on Saturday, 19th inst., by gradual sinking, eight days after her first attack. Her mind, from first to last, did not manifest the least aberration whatever.

On Tubercle of the Crus Cerebelli, with symptoms simulating Chorea.
By T. H. SHUTE, M.D., Physician to the Torbay Infirmary.

As any case tending to elucidate the physiology and pathology of the brain is of importance, I send the following, thinking it presents many points of interest to the readers of *The Lancet*:

Elizabeth S—, aged twenty-six, married three years, no family, was admitted under my care March 11th, reported to be suffering from chorea. She presented the following appearance:—Countenance not sunken nor pallid, and not evidencing pain; features not distorted; muscular and adipose tissues sufficiently developed; tongue furred, protruded with a jerk; head constantly moving to the left side; articulation very imperfect; understands and answers everything that is said to her; constantly talking whilst awake; left arm in perpetual movement, being jerked across the chest (during sleep the convulsive movements cease, and she is quite tranquil); total inability to support herself on her legs; but she can move them up in the bed; sensation not affected; has a

constant short cough, as if caused by accumulation of mucus; pulse 90; urine acid; no albumen. There was much difficulty in examining the chest. Left side appeared duller than right; mucus and subcrepitary râles, with respiratory sounds of the diffused blowing type, on that side.

The history of the case was very obscure. We could not ascertain that she had ever complained of headache; had had occasional cough for two years; had never spat blood. Four months since, whilst out walking, she suddenly fell against a wall, but without loss of consciousness, since which time she has been in her present condition.

Diagnosis.—Organic disease at the base of the brain, probably softening, near the pons Varolii; tubercular disease of the left lung. She was ordered blisters to the calves of the legs; compound ipecacuanha powder, ten grains.

March 12th. The Dover's powder had been repeated, and at the period of the visit she was in a profuse sweat, and in a quiet sleep; the movements of the arm had ceased.

18th. Still quiet; takes her food when roused.

14th. Very noisy; movements of arm and head have recommenced. Ordered, acetate of morphia, potassio-tartrate of antimony, of each one grain; water, one ounce; one drachm to be taken every three hours till she was quiet.

16th. Only two doses of mixture had been taken, and she was in such a state of prostration as to require brandy and ammonia to rouse her.

16th. Recovered from the state of prostration; movements of arm had ceased, and did not return; right pupil dilated, contracts under the influence of light, but dilates again immediately.

She died on the 6th of April.

Autopsy, forty-eight hours after death.—Vessels on convexity of brain congested; arachnoid membrane adherent along the upper and posterior edge of the longitudinal fissure; no evidences of recent inflammation of the membranes; consistence of brain firm, somewhat congested; no effusion into the ventricles; in slicing downwards, no appreciable lesion discoverable. At the base of the brain the right crus cerebelli was softened to the depth of a line on its anterior aspect, and in its substance were imbedded three crude tubercles the size of a pea, one in the centre, and two on each side, forming a triangle. The lungs were not taken from the thorax, but the posterior portion of the left was infiltrated with crude and softened tubercles.

Remarks.—The diagnosis in this case was somewhat obscure. On the one hand, we had all the symptoms of chorea, such as the constant agitation of the arm and head, the jerking protrusion of the tongue, difficulty of articulation, and perfect quietude during sleep. On the other hand, the age was not that at which chorea commences in the great majority of cases, and the mode and sud-

denness of the invasion of the malady was opposed to the idea of its being a purely nervous affection. Therefore we came to the conclusion that there was organic lesion, and that its seat was the base of the brain, which was verified by the autopsy. The deposition of tubercle in the brain of the adult is very rare, though common in children, "so much so that Louis only met with one case in 117 cases of phthisis; and Ingol, in his extensive practice at St. Louis, has only met with eight cases, and in six of these no symptom existed during life."—(Solly.) It will be remembered, that in the experiments of Magendie, when he divided one of the crura cerebelli, the animal immediately began to rotate to the same side. Now here, although the patient in all probability fell *side-ways* against a wall, the perpetual movement of the arm took place on the *opposite* to the diseased crus, the fibres of which were all but destroyed by disease; but the case is confirmatory of the proposition, "that individual parts of the brain answer individual purposes, as regards the power of regulating our movements."

[*London Lancet.*

On the Age in which Hysterical Affections are most likely to be developed. By Dr. BRIQUET.

Dr. Briquet passes in review the doctrines taught by various writers on the subject of the occurrence of hysteria, and then analyzes a series of 467 cases occurring in his own practice in the course of ten years, in which the commencement of the affection was carefully noted. Some of his inferences would probably not be universally adopted, but his numbers are important, the more so as they are in the main corroborated by the analysis of numerous cases collected by Dr. Landouzy, whose results are also given in the following table:

		Landouzy.		Briquet.	
From birth to 10 years,		0 cases		61 cases.	
"	10 " 15 "	48	"	104	"
"	15 " 20 "	105	"	162	"
"	20 " 25 "	80	"	78	"
"	25 " 30 "	40	"	28	"
"	30 " 35 "	38	"	13	"
"	35 " 40 "	15	"	12	"
"	40 " 45 "	7	"	3	"
"	45 " 50 "	8	"	1	"
"	50 " 55 "	4	"	2	"
"	55 " 60 "	4	"	1	"

Dr. Briquet attributes the differences that are manifest between his table and the numbers given by Dr. Landouzy to the circumstance of his having exercised great care in determining the exact commencement of the disease. The following are his chief conclusions:

1. A considerable number of cases of hysteria occur while the sexual organs are yet in a rudimentary state.

2. The development of hysteria does not bear a direct ratio to the period of activity of the sexual organs, as this period commences at eleven or twelve years, and does not cease till the fortieth or forty-fifth year. On the other hand, hysteria progressively advances up to the age of twenty, and very rapidly diminishes from the twentieth to the forty-fifth year. Consequently, of thirty-four years of sexual activity, there are only from nine to ten during which hysteria prevails, while it becomes less frequent during the remaining twenty-four; and yet the sexual activity is greater from twenty to forty-five years of age.—[*L'Union Médicale*, and *Med. Chir. Rev.*

We find the following short article in the *Eclectic Magazine*, a journal which we here take occasion to commend to our readers as one of the best, if not the best literary journal in the world. We have several times transferred from its pages valuable matter, which, though intended for popular reading, will be found to possess much interest to the Profession. Such an one appears to us in the following extract from a pamphlet on Fever Poisons.

Fever Poisons.

[On the subject of Scarlet fever, which has been lately making extraordinary havoc among old and young, the following useful observations occur in a small tract intended for popular dissemination by Mr. R. Pairman, surgeon, Biggar.]

After referring to the value of thorough ventilation, light, and cleanliness, in order to disinfect clothes and apartments from the invisible air-poison exhaled from the sick, the author proceeds:—It is important to know regarding infection, that when not destroyed or dispersed in the sick room, it attaches itself and adheres with great tenacity to all articles of furniture—chairs, tables, drawers, &c., nestling in their innumerable pores; and unless these articles be scrubbed with a solution of chloride of lime, or exposed to a strong heat, or a free current of air for several hours, it may again become evolved, *more virulently than at first*, after the lapse of many weeks. But it chiefly adheres to cotton and woollen materials. The patient's body-clothes and blankets become saturated with it, like a sponge with water. And in airing these materials, a mere passing breeze is not always sufficient to carry it away. A genteel country family lately related to me that, a few years ago, they had occasion to reside some time in Edinburgh; while there, one of the domestics became affected with fever of a peculiar type. After her recovery, the bed-clothes—as was thought—were sufficiently aired, packed up, and conveyed home along with the family. Through some inadvertance, they remained for four months thus

folded up; after which, being required for use, they were opened out and washed. Within a week, the person who washed them became attacked with the same type of fever, though none was prevailing in the district at the time; so that infection thus imprisoned in a blanket, or anywhere else, and not exposed to any current of air, seems not only quite indestructible, but, while thus confined, probably grows in virulence every day. Thus the infection of plague—which is just a form of typhus fever—has been packed up in a bale of cotton, and after being conveyed many hundred miles, struck with instant death the person who unloosed it. The following curious and dreadful incident, related by Dr. Parr, of Exeter, showing how plague was once disseminated in an English town, we extract from Macauley's *Dictionary of Medicine*: "The last plague which infested the town in which we now write, (says Dr. Parr,) arose from a traveller remarking to his companion, that in a former journey he had the plague in the room where they sat. 'In that corner,' said he, 'was a cupboard where the bandages were kept; it is now plastered, but they are probably there still.' He took the poker, broke down the plastering, and found them. *The disease was soon disseminated, and extensively fatal.*"

The next point requiring notice is, that one man may convey infection to another, while he himself escapes the disease. Some years ago, I received a message from a much esteemed and worthy minister, requesting a visit to two of his children. On arriving, I found them ill with scarlatina; and as they had both become suddenly affected *at the very same hour* the previous evening, it was evident that both had simultaneously imbibed the poisonous dose. But the question arose: Where could they possibly get infection? for they had ever been carefully tended by their nurse, come in contact with nobody but members of the family, and no fever of any description was prevailing for several miles around. At length the father remembered that about a week before he had visited a little girl under scarlatina in an adjoining parish; had, in the act of engaging in religious conversation, sat by her bed, taken her by the hand, rubbed his clothes on the bed-clothes of the patient—in a word, had quite unconsciously done everything likely to saturate his own clothes with infection; after which, the night being cold, he wrapped his great-coat firmly around him—thus inadvertently preventing its dispersion—mounted his horse and trotted home at a rapid pace. On reaching home, he threw off his great-coat, drew in his chair to a comfortable fire, and as any fond parent would be apt to do, forthwith got both of the children perched upon his knee, little dreaming of the poisonous present a father's love was unconsciously bestowing. That this was the mode of communicating the disease was evident by a process of exact calculation; for the infection of scarlatina lurks in the blood about five days before the fever shows itself; and on

calculating five days back from the onset of the fever, we were brought exactly to the time when the incident occurred.

If two pieces of cloth of the same material, the one *black*, and the other *white*, were, in equal circumstances, and for the same length of time, exposed to infection, the black cloth would be far sooner saturated with it than the other. We have here something analogous to the well-known law about the absorption of heat. As dark objects absorb heat more powerfully than white ones, so do they also more readily absorb infection, and all kinds of smells. Hence the mere fumigation of closes and wynds in epidemic seasons is not enough; they are afterwards very properly whitewashed. Hence also the wholesomeness of light as well as air in the dwellings of the poor, and of all those measures of cleanliness and comfort which the whiting-brush is able to impart. The haunts of infection realize those conditions with which childish fancy clothes the haunts of spectres. Dark and cheerless are its favorite dens. The "bleezing ingle and the clean hearthstane," it seems to shun; but lurks and lingers in the gloomy hovel, fattens on its dirt, and in the crevices of its smoked and dingy walls finds those most congenial nestling-places which it cannot find in the plastered, whitewashed, smooth and shining walls of cleanliness. Its fittest emblem is that mysterious plant, the deadly nightshade, which loves the darkness rather than the light, and luxuriates less abundantly in sunshine than in gloom.

Use of Chloroform in Retention of Urine.

An intemperate cabman, aged 52, was admitted into a medical ward at Guy's a few days ago, on account of chest symptoms. It appeared that he had had gonorrhoea twelve years before, and had ever since had more or less difficulty in passing his water. After having been in the hospital nearly three weeks, he was seized with retention of urine. The dresser and house surgeon made patient and repeated attempts to pass a catheter, but without result. There was little doubt that the stricture was a permanent one, which had been closed by inflammation. In February the retention had become complete for two days; the symptoms were becoming very urgent, and Mr. Cooper Forster was accordingly called to see him. Opium had been most freely given. Having failed in persevering attempts to introduce a No. 2 catheter, Mr. Forster determined to administer chloroform, and, if needful, to puncture the bladder by the rectum. When completely insensible, another trial was made with a No. 3, which now passed most readily. We cite this case as important, because it proves beyond dispute the influence of the anæsthetic state in relaxing an otherwise impermeable stricture. An opiate treatment had been fairly tried before, and had failed, and the catheter had also been found useless in the hands of sev-

eral well practised surgeons. The plan of administering chloroform in cases of obstinate stricture and retention, is one in wide use, both in hospital and private practice; but, as it is not yet in such general favor as it deserves to be, we have thought that so pointed an example of its advantages might be worth bringing before our readers.—[*Med. Times and Gazette.*]

EDITORIAL AND MISCELLANEOUS.

PROFESSOR EVE'S REPORT.—In consequence of the severe illness of his son-in-law, Dr. Walton, while away from home, Dr. Eve was compelled to be absent in North-Carolina, just at the time when his Report was partly in type, and thus its preparation for publication was interrupted; which we greatly regret, both on account of the cause—our friend's illness—and the effect it has had, of depriving us of the continuation of this paper. We take pleasure in informing our readers, that Dr. Eve and Dr. Walton, have both returned home—the latter improving in health—and that, we hope, to furnish them with the remainder of that valuable document in our next number.

DR. J. F. E. HARDY.—In the above connection, we esteem it a privilege to be able to record an instance of professional courtesy and brotherly love, which even in our courteous, liberal and loving profession, has met with few parallels. Dr. J. F. E. Hardy, near Ashville, N. C., was called to see Dr. Walton, a perfect stranger and unconnected, save by the bands of Medicine; he removed him from his hotel to his home, with the tenderest care, where he watched over him with paternal solicitude—he and his kind family anticipating every desire of the sufferer with lavish generosity, and supplying the places of *home* and of *friends* in the nearest significance of those, to an invalid in a strange land, most endearing terms. We learn, that this noble and philanthropic man, whom we are proud to call brother, was prevented from even accompanying Dr. Walton, on his way home, only by a press of business.

PROFESSOR JURIAH HARRISS.—At the close of the last course of Lectures in the Medical College of Georgia, Dr. Harriss, at that time Professor of Surgery in this Institution, was elected to the Chair of Physiology in the Savannah Medical College, vice Professor Martin, resigned. The above change occurred just about the time of our assuming editorial charge of this journal, and has thus, till now, passed unrecorded by us. Our friend, Dr. H., is well known to the readers of this journal by certain able Surgical and Physiological papers in its former volumes.

Physiology, we believe, was ever his favorite branch, and we congratulate our friends, his colleagues, upon being able, so promptly and satisfactorily, to fill the breach made by the resignation of Prof. Martin.

An Exposition of the Signs and Symptoms of Pregnancy: with some other Papers on subjects connected with Midwifery. By W. F. MONTGOMERY, A.M., M.D., M.R.I.A., Ex-Scholar of Trinity College, Dublin; Professor of Midwifery in the King and Queen's College of Physicians in Ireland, &c., &c., from the second London edition. Philadelphia: Blanchard & Lea. 1857.

This is a new edition of Dr. Montgomery's well known work on the Signs and Symptoms of Pregnancy, carefully revised and considerably enlarged: with a number of able essays on important subjects connected with obstetrics.

We do not think it is claiming too much for this work to say it is the very best in print on the signs and symptoms of pregnancy, and that it is as perfect as a book well can be. It is only to be regretted that the American edition has not the beautiful colored plates, shewing the successive changes in the areola caused by pregnancy from the third to the ninth month, which are found in the original English work; but a very good reason is assigned by the American publisher.

The first eight chapters are devoted to the signs and symptoms of pregnancy.

The subjects of the other five chapters are:

- "Chapter IX.—Examination of Substances expelled from the Uterus.—An early Ovum.—Decidua.—Moles.—Hydatids.—The Membrane formed in Dysmenorrhœa, and in other Conditions of Uterine Derangement.—Membranous Formations from the Vagina.
- "Chap. X.—Accidental Circumstances.—Idiosyncracies.—Beccaria's Test.—State of the Blood, Urine, and Pulse.—Kystein.—Vaginal Pulse.
- "Chap. XI.—Pregnancy under unusual Circumstances.—At a very early or advanced Age.—Complicated with Diseases affecting the Uterine System.—With Extra-uterine Fœtus.—Without Consciousness of Intercourse.—Without Sexual Sensibility.—After Imperfect Intercourse.—With a Secondary Ovum.—With a Blighted Ovum.
- "Chap. XII.—Spurious, or Simulated Pregnancy.—Imitative Labor.—Phantom Tumor.—Unnecessary Gastrotomy.—Heim's Extraordinary Case.—Theories of Schmitt and Harvey.
- "Chap. XIII.—Investigation after Death.—Examination of the Uterus and its Appendages.—The Ovaries.—Corpora Lutea.—Fallopian Tubes.—Antrum Tubæ.
- "On the Period of Human Gestation.—The Natural Period.—Premature Births.—Viability.—Protracted Gestation.—Tables.
- "On the Signs of Delivery.—Delivery during Natural Sleep.—Examination after Death.—Fatty Degeneration, and Reconstruction of the Uterine Substance.—Uterine Contraction after Death.—Posthumous Parturition.

"On the Spontaneous Amputation of the Fœtal Limbs in Utero, and some other Pathological Lesions, to which the Child is liable before Birth.—Rudimentary Reproduction of Lost Parts.—Fractures.—Wounds.—Effects of Coherent Placenta."

These are all very interesting subjects, treated in the most able and masterly manner, by an elegant writer and an accomplished physician, who is deservedly regarded among the highest authorities in every thing that appertains to obstetric science and practice.

J. A. E.

On the Diseases of Women ; including those of Pregnancy and Childbed.

By FLEETWOOD CHURCHILL, M.D., T.C.D., M.R.I.A., Vice-President and Fellow of the King and Queen's College of Physicians in Ireland ; one of the Presidents of the Obstetrical Society ; Professor of Midwifery, with Diseases of Women and Children, in the King and Queen's College of Physicians in Ireland ; Associate Member of the College of Physicians of Philadelphia, U. S., &c., &c. A new American edition, revised by the author. With Notes and additions, by D. FRANCIS CONDIE, M.D., Fellow of the College of Physicians, Philadelphia, &c., &c. Philadelphia : Blanchard & Lea. 1857.

Soon after the publication of Dr. Churchill's book, on Diseases of Females, in America, we adopted it as a text-book, believing it to be, though not the largest, the most comprehensive and systematic work on the subject in the English language. For some years past, a revised edition has been needed with the more recent improvements. We hail with much pleasure the volume before us, thoroughly revised, corrected, and brought up to the latest date, 'by Dr. Churchill himself, and rendered still more valuable by notes, from the experienced and able pen of Dr. D. F. Condie, of Philadelphia.

Dr. Churchill and his works are too well known to the Profession in the United States to require any commendation : a simple announcement is sufficient.

This is certainly as complete a resumé of all the latest and best information on all the diseases to which women are ever subject, as could be desired by pupil or practitioner. We have requested our friends, Messrs. T. Richards & Son, to have an ample supply on hand before the commencement of our next course of lectures.

J. A. E.

DEATH OF DR. MARSHALL HALL.—In recording here, from the *London Lancet*, the melancholy intelligence of the death of Marshall Hall, we are filled with feelings of deep regret. Science has indeed lost one of her most ardent and successful cultivators—Medical Philosophy her most able expositor, and mankind a long-tried friend and benefactor.

Our recent interesting relation to Dr. Hall, and his fair and generous relinquishment of his claims to a Physiological discovery, in our favor, had

endeared him to us, and heightened the regard which we had ever entertained for him. It will henceforth be to us a most consoling reflection that in the whole of this discussion above referred to, our sentiments and expressions towards this illustrious leader in Science, were ever characterized by the high regard and reverential respect which he inspired.

Death, that most unsparing of tyrants, has exacted from the greatest physiologist of the age the last debt of nature. Slowly, surely, and relentlessly, disease has been undermining the earthly tabernacle of a mind which, for vast powers, high purposes, and indomitable energy, has found no superior in its native land in the present half-century. On Tuesday last, the 11th inst., Dr. MARSHALL HALL died at Brighton, aged 67 years.

It is impossible to record this melancholy event without feelings of the deepest sorrow. The loss is one which all must feel most keenly who have a reverence for high endeavors, for earnest devotion to science, and for all the sterling qualities which can adorn a man. Science has lost the worthiest of her sons, medicine has lost a great master, and philosophy a great thinker. The clear and vivid intellect of this celebrated man has steadily and successfully risen superior to the depressing influences of disease for the last fifteen years. Even during the present year, when confined to one room, his chamber has been a scene of intellectual activity. Physical debility, which robs most men of their power of thinking and reasoning, had not dimmed the brightness of his wonderful mind. Clear and penetrating, and impelled by a wide philanthropy, the last contribution of Dr. Marshall Hall to science has been a preëminently useful one to the cause of humanity. It is thus that great men should die. There is a grandeur in such a life-end, to which the mere external grace of a falling Cæsar is not for one moment comparable.

Dr. Marshall Hall was born at Bashford, in Nottinghamshire, in the year 1790. His father was a manufacturer, and a man of no small capacity and information, and had the merit of being the first person to perceive the value of chlorine as a decolorizing agent, and applying it on a large scale. The gifts of intellect were bestowed with no sparing hand in this family. The father and two sons fully vindicated their claims to high intellectual endowments. But Dr. Marshall Hall has eclipsed his less brilliant relations. What in them was acumen and sagacity, was developed in him into genius. There was in him that rapid and far-reaching intellectual vision which travels into regions far beyond the common ken of man, visible and appreciable only to the eagle glance of an almost prescient inquirer.

The history of such a man cannot fail to present numerous points of interest. The investigation of the rise and progress of a mind which has ever been foremost in the ranks of science, must afford many good and useful lessons. No fitful glare can be recognized in this life—no charlatanic attempt to pluck a crown of laurels which was not deserved; but a stern, conscientious, and faithful continuance of patient scientific toil, and the solid reward of a vast reputation.

The first step in Dr. Marshall Hall's education was taken at Nottingham Academy, then conducted by the Rev. J. Blanchard. From this school he went to Newark, where he acquired some elementary medical and chemical knowledge. But the first salient point in the life of Dr. Marshall Hall

was his matriculation at Edinburgh University, in the year 1809. For a vigorous and apt mind, no better school could then have been chosen. In the present day it is hardly possible to realize the enthusiasm which inspired Edinburgh at that time. There were giants in those days. Enthusiasm, indeed, is almost too tame a word. There was a furor, an excitement produced by the united influence of a complete galaxy of talent. It was impossible but that such men as Cullen, Home, Rutherford, Gregory, Hamilton, Bell, and Barclay should kindle in the ardent minds of a vast concourse of students a flame which should burn with answering brightness to their own. From the school of that time we know many great men have sprung. It is unnecessary to particularize names which are "familiar in our mouths as household words." In that genial atmosphere, then, did Marshall Hall first imbibe that enthusiastic love of science which has been his most marked characteristic. With youthful impetuosity he plunged into the study of chemistry. Not content with merely assimilating the accepted doctrines of the science, he boldly endeavored to push its boundaries farther. With wonderful power of generalization for so young a man, and with such small materials as then existed for the purpose, Dr. Marshall Hall pointed out that there was a grand distinction between all chemical bodies, which ruled their chemical affinities. He showed that this distinction was the presence or absence of oxygen. That oxygen compounds combined with oxygen compounds, and compounds not containing oxygen with compounds similarly devoid of that element; and that the two classes of compounds did not combine together. He believed that this general law would elucidate other chemical doctrines, and might prove valuable in the prosecution of still more recondite principles. But a mind of such soaring aspirations was not likely to confine itself even to such a comparatively wide field as chemistry. The vast domain of medicine was before our student, rich in unexplored regions, abounding in all that could excite his eager spirit of inquiry, and reward his love of definite results. It was exactly at this period in the history of modern medicine that physicians were taking stock, as it were, of their old principles. Morbid anatomy, pursued in close connection with clinical medicine, was showing the defects of diagnosis. With the sagacious eye of one who was capable of seeing that the great necessity of the day was a science of diagnosis, Dr. Marshall Hall threw himself into the prosecution of this immensely important department of medicine at once. Here again we find fresh evidence of his eminently progressive spirit. No mere systematizing of what other men had gathered, but an original and comprehensive treatise resulted from the labors of his student life and early years in the profession.

In 1812 Marshall Hall took his degree of M. D., and shortly afterwards was appointed to the much-coveted post of house-physician, under Drs. Hamilton and Spens, at the Royal Infirmary of Edinburgh. In the following year we find Dr. Hall lecturing on the Principles of Diagnosis to a class, amongst whom were Dr. Robert Lee and Professor Grant. It was from this course of lectures that the treatise on Diagnosis, which was first published in 1817, took its origin.

In 1814 Dr. Marshall Hall left Edinburgh, after a residence there of five years. Great as was the individuality of this remarkable man, we cannot but point out that he was reared in a great school, taught by great men, and infected with an enthusiasm which pervaded, in some degree, all who came within its magical circle. Before entering upon his career as a pri-

vate practitioner, Dr. Hall determined to visit some of the continental schools. We find him, therefore, shortly after his departure, successively at Paris, Berlin, and Göttingen. The journey was made partly on foot, and armed. At Göttingen Dr. Hall became acquainted with Blumenbach.

In 1815, Dr. Marshall Hall settled at Nottingham as a physician, and he speedily acquired no small reputation and practice. After a time, the appointment of physician to the General Hospital there was conferred upon him, and in that sphere he labored until his removal to London, about ten years after his first settlement at Nottingham. Of his work on Diagnosis it is almost unnecessary for us now to speak in terms of praise. Comprehensive, lucid, exact, and reliable, this work has, in the main, stood the test of forty years' trial. A better has not been produced. It was at this period of his career, too, that Dr. Hall made his researches into the effects of the loss of blood, the result of which was embodied in a paper read before the Royal Medical and Chirurgical Society in 1824. This paper and another in 1832, detailing Dr. Hall's "Experiments on the Loss of Blood," were published in the "Transactions of the Royal Medical and Chirurgical Society." It is hardly possible to overrate the importance of these inquiries. They revolutionized the whole practice of medicine. A new light broke in upon the medical world. A distinction, not recognized before, was drawn between inflammation and irritation. It was pointed out that delirium and excitement were by no means necessarily declaratory of cerebral or meningeal inflammation, or even congestion. Loss of blood was shown to be at the root of much that had passed before for various grades of inflammation. Practical rules were deduced both for treatment and diagnosis. It was shown that active inflammation produced a tolerance of bleeding from a free opening in the upright posture; and the rare merit of supplying at once a rule of treatment and a rule of diagnosis was Dr. Marshall Hall's. Other works came forth from his pen about this time, for his mind was teeming with ideas, and his activity as an observer was unparalleled. It is hardly possible to enumerate all, but in 1827 came the "Commentaries upon various Diseases peculiar to Females"—a work which may still be consulted with advantage.

It was in 1826 that Dr. Marshall Hall sought this great metropolis as the umbilicus of the world. So active and earnest a mind could not find enough to satisfy its eager cravings in a provincial town. It was here, in this mighty city, that he determined to measure himself again with numerous competitors, and to win, if possible, all the honor and all the rewards that fortune can give to those who woo her stoutly. The mind of this great man was essentially metropolitan and liberal. A fair field and no favor, and victory to the strongest, were the characteristics of his mind.

The next onward step in Dr. Marshall Hall's career was a series of researches into the circulation of the blood in the minute vessels of the batrachia. A great step in physiology resulted from these. It was shown that the capillary vessels, properly so-called, are distinct, absolutely, both in structure and function, from the smallest arteries or veins; that the capillaries, or *methæmata*, are the vessels in which the nutritive changes in the economy are carried on.

But the great source of Dr. Marshall Hall's honor, the basis upon which his fame must rest in all time to come, was yet undeveloped; his paramount claims to the admiration of his cotemporaries and of posterity consists in his discoveries concerning the nervous system. Like all really important

discoveries in natural science, those of Dr. Marshall Hall have had great practical effects. The soundest theory has been shown to be the best foundation for practice. That stupid heresy, that there is a vital distinction between the practical and theoretical man, was never more completely disproved than in the case of Marshall Hall. But we must endeavor to trace the progress of his researches. While engaged on the *Essay on the Circulation of the Blood*, it happened that a triton was decapitated. The headless body was divided into three portions: one consisted of the anterior extremities, another of the posterior, and a third of the tail. On irritating the last with a probe, it moved and coiled upwards; and similar phenomena occurred with the other segments of the body. Here, then, was a great question. Whence came that motor power? To set at rest that question, to solve that problem, has been the great labor of Dr. Marshall Hall's life.

The establishment of the reflex functions of this spinal cord; in short, the whole of the excito-motor physiology of the nervous system is the sole work of Dr. Marshall Hall. And not only this, but he has shown that there are in reality *THREE* great classes into which the various parts of the nervous system resolve themselves; the cerebral, or sentient-voluntary; the true spinal, or excito-motor; and the ganglionic. This was the real unravelling of that perplexed and tangled web which none had before been able to accomplish. The true idea of a nervous centre could never be said to have existed before the time of Marshall Hall. The ideas of centric and eccentric action, of reflexion, &c., so necessary to the comprehension of nerve-physiology, were unknown before the labors of this great discoverer. But these physiological discoveries were not mere barren facts. How rich a practical fund of therapeutical measures naturally follows the physiology and pathology of the excito-motor system, every well informed physician can testify. Two departments of medical practice have gained incalculably. The success of Dr. Marshall Hall in the treatment of nervous diseases was almost entirely the result of a rigid application of his own physiological discoveries to their pathology and therapeutics. Obstetricians have found their art elevated more than any other branch of medicine. In the place of uncertain and empirical rules, there are now definite and scientific principles upon which to fall back, with the unhesitating assurance that they will stand in good stead. The most complicated of all physiological acts, viz: the act of parturition, has, by the aid of the excito-motor system, been unravelled and reduced to beautiful harmony, if not simplicity. In like manner, many of the diseases of pregnancy are explained and illuminated by the same physiological knowledge. Innumerable symptoms of other diseases are rendered intelligible and rational, which before were obscure and empirical. But to follow out the influence of Dr. Marshall Hall's discoveries through their numerous and important ramifications would be almost to write a volume on the principles of medicine. It is impossible to say when we shall cease to find some new and important application of his discoveries to the great art of healing.

We cannot pass by this period of Dr. Marshall Hall's life without remarking upon the disgraceful treatment he received from the Royal Society. The days of persecution had happily passed by, but the day of dull obstructiveness still remained. The Royal Society thought Dr. Hall's memoir "*On the True Spinal Marrow and the Excito-Motor System of Nerves*" unworthy of publication! So much for the acumen of this Society. A

very different verdict has, however, been given since by the great body of scientific men; and the Society, which formerly received this great man's contribution coldly, now mourns the loss of its brightest and most illustrious member.

Since the promulgation of his researches upon the nervous system, Dr. Marshall Hall has been principally occupied with extending, applying, and developing them in every possible direction. The admirable success with which he indoctrinated the profession at large with his views must be attributed as well to his native lucidity as to their inherent truth.

During the time of Palmer's trial, it occurred to Dr. Hall to institute a physiological test for the recognition of strychnia. As if to show the absolute correctness of his views, and how unlimited were the number and nature of the scrutinies they would bear, he found that a frog, immersed in water containing the $\frac{1}{1000}$ part of a grain of strychnia, would, in process of time, be thrown into tetanic convulsions. For the details of these experiments we must refer to *The Lancet* of last year. The physiological test was found to be far more delicate than the chemical. Here was an instance of sagacity and precision of thought which would have done credit to any man in the flower of his age.

The last and crowning effort of Dr. Marshall Hall in the cause of science and humanity has been his discovery of what is now universally known as the "Marshall Hall Method" of restoring asphyxiated persons. How completely and irrefragably he has proved the inutility and danger of the practices hitherto in vogue for the resuscitation of asphyxiated persons! Space prevents us from going into the theoretical details of Dr. Marshall Hall's method; but our columns have, for any time these last six months, contained overwhelming proofs of its *truth* and adaptation to practice. It is pleasing to find that this last labor of a great mind has been a labor of love, something added to the stock of human happiness, something taken away from the bitterness of life. It is singular enough that in the very place where Marshall Hall has drawn his last breath, two cases have lately occurred illustrating the superiority of the "Marshall Hall Method" over the empirical rules of the Royal Humane Society. In one case of drowning the warm bath was administered; in another, the "Marshall Hall Method" was resorted to: in the first case death was the result; in the second, restoration to life. It is also remarkable that in this number of our journal should be recorded three more examples, illustrative of the successful application of the "Marshall Hall Method" of treatment. It is curious, too, that one of them should have occurred at Nottingham.

In the practice of his profession, Dr. Marshall Hall was very successful. He linked himself early and resolutely to a great subject, and rose into fame upon his development of it. He realized an ample fortune as the reward of a life of unremitting toil. We do not mean to imply that competency was hardly earned under such conditions. Such a man would have been less than happy in a different sphere. Labor was to his restless and indomitable spirit a necessity. Even now, when we are recording the death of this illustrious and lamented physician, there is a volume in the press,—a recent effort of his prolific mind; and until within two months before his dissolution, the mental energies of this extraordinary man were engaged in preparing for publication, in "*The Lancet*, a series of papers, entitled, "The Complete Physiology of the Nervous System."

It is somewhat remarkable that Dr. Marshall Hall never held the office

of physician in a hospital in London. He was only physician to a dispensary for a short time. He lectured at the Aldersgate-street and Webb-street School of Medicine, and also at St. Thomas's Hospital Medical School. He was a candidate for the Professorship of Medicine at University College upon one occasion; but owing, it is believed, to some improper influences, matters assumed such an aspect as to induce Dr. Hall to retire from the field.

We have thus far considered Dr. Hall as a man of science. In other relations of life he was equally deserving of our highest respect. As a politician, he was liberal in the highest degree. He was a strictly moral man, and was deeply imbued with a sense of the obligation of a *practical* cultivation of religion. That which he thought right to do, he *did*, with unswerving honesty and courage. All subterfuge, trickery, quackery, and guile, were utterly foreign to his nature. So simple and childlike was he in disposition, as hardly to be able to imagine in others the guile which had no home in his own breast. He was a kind husband, a most indulgent father, and a faithful friend. He married, in 1829, Charlotte, second daughter of Valentine Green, Esq., of Normanton-le-Heath, Leicestershire. Mrs. Marshall Hall's maternal grandfather was M.P. for Shaftesbury, and son of Dr. Cromwell Mortimer, physician to the Prince of Wales, father of George III. Throughout the protracted illness of Dr. Marshall Hall, the assiduous, devoted, and unremitting attentions of an affectionate wife were probably never surpassed. This testimony is due from personal observation of the fact. The deceased has left one son, who has relinquished the profession for the rural life of a country gentleman.

We must now close our notice of one over whose name we would fain linger. Melancholy as it is to say he *was* amongst us, our sorrow is stayed by the reflection that he did not live in vain. All that a grateful profession has to give to his memory will be given. We shall still think of him with affectionate respect as a Father in Medicine, but as a child in the purity and simplicity of his mind. Though no title has adorned the name of the great Marshall Hall, we who are left behind will esteem him as one who would have graced rather than have been graced by honors however exalted. The *title*, which he preferred beyond all others was that of the English physiologist.

The mortal remains of this distinguished man were, on Wednesday last, removed from Brighton to Nottingham, where, we believe, a post-mortem examination has been made by his brother-in-law, Mr. Higginbottom, his nephew, Mr. Higginbottom, Jr., and Dr. Ransom, physician to the Nottingham General Hospital. It is believed that the death of Dr. Marshall Hall was caused by exhaustion produced by a stricture of the œsophagus of many years' standing, accompanied latterly, it was considered by many eminent surgeons, with malignant ulceration of the part. Dr. Alfred Hall, of the Old Steyne, Brighton, was one of the chief medical attendants of the deceased in his last illness. Sir Benjamin Brodie had long since pronounced the malady from which Dr. Marshall Hall was suffering to afford no hope of the application of any permanent remedy.

Sulphate of Zinc and Nitrate of Silver in Chronic Ophthalmia.—Dr. Posta endeavors to lay down some rules, based on practical experience, respecting the employment of these substances. In all ophthalmias, the zinc should be employed as soon as the chronic stage commences, the pro-

portion being at first 1 part to 75 of the vehicle, going on in case of resistance of the disease to 2 to 100. When there is a slight degree of chronic keratitis present, with cloudiness of the cornea, the nitrate (1-20 part to 30 parts) is the preferable means. He considers that all greater strength than this is unjustifiable and mischievous.—[*Bull. de Thérap.*, and *Peninsular Journal of Medicine*.]

Gonorrhœa.—Mr. Dallas, of Odessa, confirms the statements of Taddei, Marchal and others, that copaiba injections afford the most efficacious treatment of gonorrhœa. He reports sixteen cases cured, without internal remedies, by repeated injections of the following mixture:—Copaibæ, dr. 5; vitell. ovi unius; ext. epii, gr. j; aquæ, oz. vij. Dr. Henry Hancox (*Lancet*, Aug. 1856) pronounces buchu as effectual as copaiba in the treatment of gonorrhœa.—[*Med. Chir. Rev.*]

Climate in Consumption.—Dr. Hays, by request, gave his views to the Ohio State Medical Society in regard to the treatment of chilblains, frost-bites, &c. In the course of his remarks, he said that in the expedition to the Arctic regions with Dr. Kane, he had never seen a case of tubercular disease among the natives, and heard of but one case of hæmorrhage from the lungs. "If he had a consumptive patient, he would send him to Greenland, if possible, and put him upon train oil diet, with a dog sledge and a bear hunt for exercise."—*Boston Med. and Surg. Jour.*

Wholesome Bread.—A large company has been formed in London for the manufacture and sale of perfectly genuine flour and bread. A mill of enormous capacity has been secured, and the dough will be kneaded by machinery, exposed to public view while in full operation. All the analytical arrangements will be under the immediate personal supervision of Dr. Hassall. A capitalist, an experienced miller, is so confident of the commercial success of the company, that he has engaged to embark in it no less than fifty thousand dollars.—[*Ib.*]

Lilac Leaves as a Febrifuge.—M. Macario having been induced to try these in intermittent fever, owing to a popular reputation they had acquired in Flanders, found that of 20 cases, 13 were entirely successful, and 7 failed. In some of the former, quinine or arsenic had failed. A decoction of the leaves was administered fasting, during five or six days in succession.

Rev. Méd., and *Peninsular Jour. of Med.*

Sesquichloride of Iron in Hemorrhages.—Dr. Herzfelder quite confirms the good accounts of this given by the French practitioners, as a most valuable agent in various kinds of internal hemorrhage, and far superior to ice, alum, tannin, etc. He dissolves a scruple in 4 ounces of water, and gives a spoonful every quarter or half hour. Dr. Raith confirming this account, and especially as regards uterine hemorrhages, prefers the tinct. ferri sesquichl., as the watery solution is very nauseous.—[*Buchner's Report and Nashville Jour. of Med. and Surg.*]

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ORIGINAL AND ECLECTIC.

ARTICLE XXXI.

A Report on Diseases of the Cervix Uteri. By JOSEPH A EYE, M.D.,
Professor of Obstetrics and Diseases of Women and Children, in
the Medical College of Georgia. (Read before the Medical So-
ciety of the State of Georgia, at the Annual meeting in Augusta,
April, 1857, and ordered to be printed.)

[Concluded from p. 527, Sept. No.]

*With respect to the third point—the Treatment—*there is great difference of opinion; some consider no special local treatment necessary, and look upon medical treatment alone as sufficient for the cure of inflammation and ulceration of the cervix,—whilst others regard this as altogether inadequate, and believe local surgical applications essentially requisite.

For many years my reliance was almost exclusively on medical treatment, with the prescription of vaginal injections, blisters, cups, etc., to the sacrum and loins; my success was only partial and very unsatisfactory. ~~such cases frequently relapsing, and re-~~ quiring a repetition of the same remedies; whereas, since the surgical, or what has been styled the medico-chirurgical treatment of simple inflammation and ulceration of the cervix has been adopted, such cases are undertaken with more confidence and certainty of cure, than any other class of chronic diseases; their re-

doubtless requisite, when the stronger caustics are employed; but it is certainly not absolutely necessary, when nitrate of silver only is applied at weekly or even longer intervals.

In reference to the treatment of leucorrhœa, which is tantamount to that of inflammation or ulceration of the cervix, inasmuch as in most cases of leucorrhœa the pathological condition is inflammation of that part, with or without ulceration, Dr. Tyler Smith remarks: "Absolute separation should never be advised except for good and sufficient reasons. In leucorrhœa intercourse should only be forbidden in the worst cases. This is one objection to the use of caustics in mild cases of leucorrhœa, because it is necessary to enjoin separation while they are employed. When intercourse causes considerable pain, excites bleeding, or where the os and cervix are secreting pus, it is out of the question, but its moderate use is quite compatible with the successful treatment of profuse mucous leucorrhœa. It may be questioned whether it does not relieve the uterus of states of congestion, which occur in the unmarried, and are probably a cause of leucorrhœa in single women, or in the married who live in separation from their husbands."

According to this truly scientific and talented author, the presence of the husband might even prove beneficial. Since caustics have been employed no difference is observed in the treatment of those whose husbands are present and in that of the unmarried, or those whose husbands are absent; before their employment, the latter certainly improved faster than the former.

At present, so far from enjoining "rest in the recumbent posture," my patients are required to take exercise in the open air regularly, and systematically, as much as they can without inducing pain or much fatigue. One great advantage in the treatment by cauterization is, that it allows exercise,* which is essential to restoration of the general health and strength; without attention to which, local affections, generally, are not treated to best advantage.

The condition of the bowels, the state of the stomach, and of the general system, the regulation of diet, &c., all received as much, if not more, attention, before, than since the adoption of cauterization. The occurrence of the menstrual period was watched with as much care, and every symptom of disorder met by its appropriate remedy as promptly heretofore as at present.

* See Tyler Smith, p. 194-195.

As great reliance was necessarily placed on internal remedies, nothing was neglected that might tend to improve the general health, and with it, the local condition of the uterus; no remedy was untried that might possibly, through the general system, act locally or specifically on the uterus. Vaginal injections were also as fully and faithfully administered then, as now; for they were regarded of primary importance.

When the cervix is coated by a layer of albuminous secretion, it is previously washed away by injections of cold water, or removed by a piece of cotton or soft cloth applied to that part, by the speculum forceps through the speculum, before applying the caustic, which is generally done *thoroughly*, especially when ulceration is present: the lightness or severity with which the application is made must be governed by the acuteness of the inflammation or the sensitiveness of the part: sometimes a very slight touch would do much good, when a more active cauterization would do harm.

No one would welcome with more pleasure than myself, any plan of treatment which would dispense with "the intervention of the medical attendant:" this would indeed be a great desideratum—an attainment in practice of inestimable value. Consulted by patients for supposed uterine disease, I am always happy when able to declare their apprehensions groundless and an examination unnecessary, or when an examination is indicated, that the case does not demand remedies which require to be applied by the physician himself. Nor would I ever have been willing to make applications of caustics directly to the neck of the uterus, had not all the measures, considered so efficient by Dr. West, very often proved most unsatisfactory in serious chronic cases after the most faithful trial.

The treatment Dr. West proposes is, doubtless, well calculated to remove a large portion of "the disorders to which the sexual system of woman is subject," and the most zealous advocates of cauterization admit the same in theory and carry it out in practice: but in confirmed diseases of the cervix, although it may often afford temporary alleviation, it will generally at least fail to effect a permanent cure.

In corroboration of these views, I would here make the following extract from Dr. Bennett's Review of Uterine Pathology, page 27:

"That the local lesions and the break-down of health are connected is evident from their very general co-existence; and that the entire removal of the local mischief is necessary for the permanent recovery of health, is a fact of which I every day become more convinced. For many years I have been living amongst a population of invalids, presenting the two conditions. Before they apply to me they have generally exhausted, during years, all the resources of medical science, and have enjoyed every advantage that social means and the affection and kindness of relatives can contribute; but all in vain, because the local uterine mischief has been overlooked. That once discovered and remedied, they gradually rally, and are eventually restored to health. Such, also has been the experience of very many talented practitioners whom I could name, were it desirable. Nor can it be said, as Dr. West surmises (p. 81), that these patients recovered—owing to the rest and the correct medical and hygienic management which was combined with the local treatment, the latter being a useless concomitant of such general treatment.—All these means have generally been tried for years, in the cases to which I allude, by the most skilful practitioners, but in vain."

Elsewhere, Dr. B. speaks of the failure of general treatment as the test for the necessity of local, special or surgical treatment.

In the treatment of these cases, as of all other diseases, it is a great error to rely on any exclusive plan of treatment. When the inflammation is at all acute, scarrification of the cervix, externally or internally, and the direct application of leeches, are of the very first importance; and general antiphlogistic treatment avails much; also, soothing and sedative lotions, and revellents to the sacrum and the hypogastric and inguinal regions. But when the inflammation is chronic, especially when there is ulceration, nothing, in my opinion, can be so effectual as the application of the milder caustics directly to the inflamed or ulcerated surface. I decidedly prefer the milder caustics, and believe the more intense are seldom, if ever necessary in simple inflammation or ulceration: of their employment in specific and malignant affections it is not my place to speak: of their effects in the latter, I trust we will hear from one who I know is able to do justice to the subject—my friend, Dr. J. M. Green of Macon, who has been appointed by this Society to write a report on that subject.

I prefer the solid Nit. of Silver, No. 1, in larger sticks than

usually found in commerce, applied by means of the speculum-forceps, through a speculum, to the cervix externally, and introduced directly into the cervical canal. The application should be repeated every six, seven or eight days, avoiding menstrual periods, and two days before and after. M. Lisfrance says, "the caustic is not to be applied within four or five days of the appearance of the menses, and for three or four days afterward." This is certainly not necessary in using the nitrate of silver; two days before and after are amply sufficient: indeed I have known it two or three times applied during menstruation, without any unpleasant consequences, but would not advise it except under very peculiar circumstances.

For the application of the caustic a long slender pair of forceps answers best; for by it the caustic may be held at any angle, more accurately and uniformly applied to the cervix, and introduced with greater facility into the cervical canal. Ever since 1848, I have been in the habit of thus introducing the solid caustic into the cervical canal, some years before I remember to have seen it recommended by any one else.

On reference to an American edition of Dr. Bennett's work, published in 1853, which, however, I had not previously read, I find he says—"If the ulceration penetrates into the cervical cavity, the solid nitrate of silver may be pushed into it as far as it will enter, or a camel-hair pencil, loaded with a saturated solution, may be used in the same way. There is no fear, as we have seen, of penetrating too far, as the cervical canal is only sufficiently dilated to admit the brush, or the caustic cylinder, in the region to which inflammatory action extends. Beyond the point where inflammation ceases, the natural and healthy coarctation of the cervical canal will prevent their passing. I prefer the brush when the inflammation penetrates very far, lest the stick of caustic should break. This has occurred to me more than once, but I have never had any difficulty in extracting the fragment, either by means of the speculum forceps, the end of which I have had purposely made small, or of the uterine sound. Thence the necessity of examining the piece of caustic that has been used, when it is withdrawn, in order to see that it is entire."

In another edition, which was published in 1850, Dr. B. says: "The only caustic that can be used with advantage in inflammation of the cervix without ulceration or hypertrophy, is the nitrate

of silver, which acts, however, more as an astringent than as a caustic. The solid nitrate of silver, or a strong solution, should be applied every three, four, or five days, to the inflamed mucous membrane covering the cervix. This is also the mode of treatment to which I have principally recourse, in the first instance, in inflammation of the cavity of the uterine neck, carrying the caustic into the cervical cavity as far as it will pass."

The introduction of the solid nitrate into the cervical canal is doubtless intended, but the mode is not expressed. In Dr. Bennett's first treatise on Inflammation and Ulceration of the Cervix, a very small work, republished in this country in 1847, I do not think it is advised. I regret not having a copy for reference.

While in Philadelphia, in 1848, my friend, Professor Meigs, suggested to me the use of an instrument for cauterizing the cervical canal, very similar to Lallemand's sound for the male urethra; but finding it comparatively inefficient and unsatisfactory, I adopted the method of inserting the solid nitrate by means of the speculum forceps.*

Dr. Bennett prefers the brush when the inflammation penetrates very far, lest the stick might break; but while the solid caustic is more efficient, his apprehension is groundless, for such is the contractile power of the cervical canal, that whenever the stick breaks or becomes loose from the forceps, it is immediately extruded. In proof of this power, Dr. Gardner of New York, in his excellent work on Sterility, published last year, says, (page 26,) "I passed a loose piece of nitrate of silver, about three-quarters of an inch in length, into the cavity of the cervix, by means of a long pair of forceps, and as fast as it was introduced and there left, it was immediately pushed out by the contractions of the neck of the uterus, and with so much force as to be thrown out of the vagina."

I have very frequently seen it thrown from the cervical canal into the vagina or speculum; the caustic has not only the property of exciting the contractility of the cervical canal momentarily, but by repeated application it causes permanent contraction, when

* NOTE.—Dr. Churchill, in a new edition of his work on Diseases of Women, published since this report was read, says, "after curing the external erosion or ulceration, we must carefully examine, as far as we can, the state of the cervical canal, and if the disease has extended therein, apply the iodine or other preparations to the part by means of long fine pencils of lint," thus ignoring, or at least not directing, the more effectual method advanced above, when the nitrate of silver is used.

it has been previously rendered so patulous by inflammation as to admit easily the introduction of a finger; in these cases it has been restored to its natural size.

When the stronger caustics are employed, the canal sometimes becomes so much contracted, almost obliterated, that artificial dilatation is rendered necessary. I have never known this result from the use of nitrate of silver. Dr. Bennett, however, says artificial dilatation may be required after the use of the milder caustics, but that it is then more easily accomplished, the contraction existing in a minor degree.*

I often insert a piece of caustic an inch long, sometimes an inch and a half and even two inches into the cervical canal, in which last instances it probably passes beyond the os internum, which perhaps is only practicable when preternaturally patulous from the extension of inflammation or ulceration through it, when also its diminished contractility renders greater caution necessary in its introduction, lest a piece might break off and slip into the cavity of the body of the uterus, which, however, I have never known to happen: when it passes beyond the os internum, it generally causes pain, sometimes requiring an opiate for its relief, but no other unpleasant symptom has ever supervened.

Dr. Green, in his able treatise, already referred to, recommends the application of caustics to the cervical canal, even during pregnancy—(page 48.)

"Ulceration of the cervix uteri may be treated with more certainty and success during the pregnant state, from a disposition in nature to cure the disease at this time and remove the inflammatory hardening, thus preparing the way for delivery.

"During pregnancy, where abortion or miscarriage is threatened, we should not wait a moment for the commencement of treatment, but apply our caustics immediately to the whole ulcerated surface, clear up to the internal coarctation. Nitrate of silver is the great sedative of chronic inflammation and irritations of the mucous membrane, and prompt treatment the only thing to prevent the irritation extending through the canal to the uterine body, and provoking the premature expulsion of its contents.

"In pregnancy these cases will bear stronger applications, and more decided treatment than in the non-pregnant state."

It may be excessive and needless caution, but I concur with

* See pages 242, 243, last edition.

those who consider it safer to use no caustic stronger than nitrate of silver during pregnancy.

The satisfaction and success I have had in treating cervical disease depend in a great degree on the adoption of this method—that is, on examining particularly into the state of the cervical canal, and in promptly treating disease when it extends therein. The external application alone will not always suffice; the external inflammation may be cured, while inflammation of the canal, perhaps an ulcer concealed within, may continue, with a mucopurulent or purulent discharge from the os. A case strongly illustrative of this fact occurs to me. Dr. B., from South-western Georgia, in returning from Virginia last summer, requested me to visit his lady and make a specular examination, stating that an eminent physician had treated her for inflammation of the cervix by caustic. Externally there was no inflammation, but it appeared to extend into the canal. On enquiry, I was informed that the caustic had not been applied internally. I advised him to apply it internally and to give her tonics. In a few months information was received of her perfect recovery.

In another case, more recently, I was consulted by a lady from Newton county, who had been treated for inflammation of the cervix by cauterization externally. On specular examination, there was not a trace of external inflammation, while ulceration was observed to extend from the os into the cervical canal.

In some cases, on first examination, the speculum reveals inflammation or ulceration in the interior of the cervix, the external surface being free from disease.

In the intervals between the applications, astringent vaginal injections should be used two or three times daily, consisting of a solution of alum alone, or with tannin, or in sage tea. Sulphate of zinc is also an excellent astringent. Goulard's extract, diluted, or a solution of morphine in flaxseed tea may be prescribed, when there is much irritation.

These vaginal injections have a much better effect, when administered to the patient on her knees and breast, in which position the womb, if prolapsed, returns to its natural situation, as soon as air is allowed to enter the vagina, which is in a corresponding degree lengthened and capacitated to hold a larger quantity of the lotion, which may be retained as long as desired, by the patient pressing a napkin firmly against the vulva

previous to lying down: a napkin thus applied serves to retain the injection as long as desired, and to absorb it when allowed to pass away.

If too weak to assume or maintain this position, the patient's pelvis may be elevated by a pillow; for when administered in the usual way, the patient sitting or lying down, only a very small quantity enters and passes directly out, doing comparatively very little good.

Unless the vagina be permanently contracted by the long continuance of the prolapsus, whenever an injection is administered in the position indicated, the womb is replaced and the vagina submitted fully to the astringent and roborant influence of the lotion:—the patient is thus very thoroughly and generally effectually treated for the prolapsus, while undergoing treatment for the cervical disease, and the subsequent necessity for artificial support almost invariably obviated.

When the patient's general health is in all respects good, her suffering altogether local—local applications are found sufficient alone, without general treatment; but there are very few cases of long standing without some complication, demanding medical prescription.

The perfection of practice in these affections consists in the happy blending of medical and surgical treatment. Our limits will not allow us to say much on the subject of the medical treatment—it consists in the adoption of such measures as may be indicated for the removal of sympathetic or concurrent diseases in other organs and the improvement of the general health of the patient, as through the blood, and in the administration of those remedial agents which may through the system act locally on the uterus. For the fulfilment of the first indication, may be called in requisition tonics of all kinds, especially the chalybeates and vegetable bitters, mercurials, laxatives, antacids, nervine stimulants, the regulation of diet, of exercise, and indeed whatever is calculated to improve health and increase strength.

When dyspepsia and anæmia are present, as they often are, requiring prescription, next to properly regulated diet and exercise, the following combination of medicines will often be found very beneficial—a pill, consisting of $\frac{1}{4}$ gr. of the extract of *nux vomica*, 2 grs. of iron by hydrogen, and 10 grs. of the subnitrate of bismuth: one to be taken three times a day.

Nux vomica acts very beneficially as an excitant of the whole nervous system, and in promoting the peristaltic action of the intestinal canal: when prescribed merely for its effect upon the bowels, it is better to give it in combination with blue mass, rhubarb, comp. ext. of colocynth, or some other purgative, which it renders efficient in comparatively very small doses.

Iron by hydrogen is decidedly one of the best chalybeate preparations—the dose is very small, it is not offensive to the taste or to the stomach, and appears to enter with great facility into the circulation. As a gastric tonic, the subnitrate of bismuth is equal, if not superior to any article in the whole *Materia Medica*. It may be given with impunity, and often with great benefit, in much larger doses than stated above. When there is dyspepsia without anæmia, the same number of grains, or more, of the extract of hyoscyamus may be substituted for the iron; but the beneficial influence of iron is not limited to anæmic subjects. When a bitter tonic is indicated, none answers better than Huxham's tincture of cinchona—comp. tincture of gentian, or, what is perhaps better than either, a formula suggested by Dr. Robert Campbell of this city, a tincture composed of equal parts of red bark, gentian and cardamom seed—these may be prescribed alone or as vehicles for some of the preparations of iron and iodine.

The medicines that act most beneficially on the general system, and through it locally on the uterus or other organ that may be in a morbid state, are the preparations of iodine, iron, arsenic, mercury and silver: when administered in proper doses and under proper circumstances, they influence vitality and modify nutrition so favorably, that they may with great propriety be termed eutrophics; but although very similar in some of their effects, they are different in their mode of operation. Mercury is decidedly antiphlogistic and depressing; hence its great value in all acute inflammations, whilst at the same time its influence in modifying nutrition is most palpably evinced in resolving indurations, and in causing the removal of nodes, chronic enlargements, as seen in cases of enlarged testicles, &c. Mercury, although perhaps one of the most reliable agents in hypertrophy, induration or chronic engorgement of the uterus, must be employed with great circumspection, unless the patient has considerable stamina left. The proto-iodide is in such cases decidedly the best preparation—the combination with iodine renders it more efficient in modifying nutrition, while it corrects to

some extent its depressing influence: the only objection to its use is that, like other preparations, if not given with great care it will sometimes cause salivation. Another most excellent formula for the administration of mercury is Plummer's pill. Iron, iodine, arsenic and silver, in small doses—and they ought never to be prescribed in any other—are all both tonic and eutrophic. Of these the best preparations are Quenesville's metallic iron, syrup of iodide of iron, iodide of arsenic, iodide and oxide of silver, iodide of potassium, Lugol's solution, tartrate of iron and potash, Vallet's paste. It has been said, and I believe with truth, that the best effects from iron and iodine can be obtained by the conjoint prescription of tartrate of iron and potash and iodide of potassium.

The following formulæ have been frequently employed with the most satisfactory results:

R. Iodid. Potass.	3iij.
Tart. ferri and Potass.	3vj.
Water or Comp. Tinct. Gentian, .	Oj.

A tablespoonful to be taken three times a day.

R. Iodide of Silver, . . .	3i.
Ext. Hyosciami. . . .	3ij.
Iron by Hydrogen, . . .	3iij.

Make 60 pills. One pill to be taken three times daily.

R. Proto-iodide of Mercury, . . .	gr. xxiv.
Ext. Hyosciami.	gr. lxxij.
Iron by Hydrogen,	3iss.

Make 36 pills. One pill to be taken three times daily.

In some cases of leucorrhœa, supposed to depend on, or to be connected with, cervical inflammation, (it being always desirable to try medical treatment, before resorting to surgical means,) the patients have been directed to take one of the following pills three times daily, and to use astringent vaginal injections,* which have

* Since this report was read, I often prescribe chlorate of potash according to the suggestion of Dr. Brown of North Carolina. It was my intention to have added, as a supplement to this report, remarks on chlorate of potash and several other subjects, and a few illustrative cases; they may be furnished for a future number.

caused the removal of the leucorrhœa at least, and an improvement of their general health.

R. Sulph. Ferri,
 " Zinci,
 " Quiniæ, aa 3ij. Make 60 pills.

No particular restriction in diet appears to be necessary in general, except that it be the most digestible and nutritious and least exciting.

The importance of exercise has been already stated.

In concluding this report, I cannot but regret not being able to do justice to so important a subject. Although restricted to its narrowest limits, the more closely it is contemplated, the more it grows in magnitude and importance, demanding for its full examination and elucidation a far more thorough and extended elaboration than this Society could possibly expect or desire on the present occasion.

ARTICLE XXXII.

Remarkable Case of Hysterical Convulsions. Reported by ALBERT W. HENLEY, M. D., of Bushville, Franklin County, Ga.

As it may be interesting to some of my junior brothers, I propose relating a few of the principal characteristics connected with the case above mentioned, which came under my notice last year.

The patient was a robust, healthy girl, æt. seventeen years, of leuco-phlegmatic temperament; was taken in the evening of 25th April, 1856, complaining with slight pain in the head, which was soon followed by prostration, accompanied with spasmodic or convulsive twitchings of the feet and hands. A messenger was immediately summoned to start for me, but was called back, being told that the patient was dead. She, however, gave signs of returning vitality, and he was again dispatched. I reached her about twelve o'clock at night. On hearing her moans and shrieks as I alighted at the gate, I was instantly struck with the idea of hysterics. When entering the house, I perceived her lying full length on the floor, on her back, apparently dead, or *in articulo*

mortis; the fingers being violently contracted, eyes fixed, and the lower maxilla in a drooping condition. I addressed her several times, but she returned no sign of attention. The inmates of the house told me that she had "died away" several times in the same manner before I reached her. I then examined the pulse, found it perfectly natural, with no febrile excitement, the body being of an equal temperature; but not the least sign of respiration could be detected. I then made an attempt to arouse her, by raising her in the recumbent posture, frictions, cold applications to the head, stimulants to the nostrils, but none availed anything; however, she aroused herself voluntarily, when she screamed until she again fell into a state of syncope or coma—and so on. I was at first somewhat uncertain as to forming a diagnosis. I made inquiry as to whether she had sustained any previous injury or not—as the case presented somewhat the appearance of a case of tetanus—she had received no injury known to any one present, and I therefore believed more strongly that it was a case of hysteria or hysterical paralysis. I inquired into the condition of the catamenia, but could get no definite answer, as the patient was from home and her mother not present. I then examined the spine and could detect no tenderness, except about the third and fourth lumbar vertebrae, and that was very slight. But in examining other parts of the body, I found extreme tenderness over the epigastric and mammary regions; which could only be detected during the paroxysm. She did not appear sensitive to anything during the intermission. After about the sixth paroxysm, a violent fit of laughter succeeded the comatose stage, the convulsions again returning. I then inquired if she was laboring under any mental emotions of any kind. Those present knew of none. Knowing that a woman (her sister) had been in labour, *primipara*, on the premises, late the same evening, I inquired as to whether the patient witnessed the delivery or not? and what impression it made upon her? I was told that she *was* present, and it alarmed her very much, it being the first thing of that nature she had ever witnessed. Some of the family having arrived, I again made inquiry as to the condition of the menses, and learned that she had been "unregular" for something like twelve months previously, and that she also suffered with leucorrhœa. I then based my diagnosis, as I considered, on the etiological facts, namely, deranged menstrual secretion, and mental emotions from witness-

ing the delivery of her sister; both connected, brought on these hysterical phenomena.

Notwithstanding, a good old sister, one of the wary disciples of the *obstetrical* art, thought different. She thought, and tried to make me believe, "*that her courses turned up and got into her head! Scared back!!*" I then proceeded to the treatment and considered that an emetic of ipecacuanha and tart. antimonii, from its relaxation, revulsion, and excitation, would be the best to begin with; I however first experimented with water to know whether deglutition was suspended or not, and found that it was; for during the paroxysm the teeth were so violently approximated that I could not separate them by compression, nor in any other manner; and during the comatose stage there was a perfect dysphagia, the fluid being introduced would immediately return. Despairing of emesis at that time, I had her immersed in a warm bath, applied a blister to the nucha, directed the spine to be rubbed with a strong liniment, and administered, with difficulty, 25 drops of laudanum. She then became quiet, fell into a comfortable sleep and I took my departure, promising to return next day.

I would here mention that the spasms or paroxysms would, up to this time, return about every four and five minutes, sometimes longer. They would be invariably followed by a profound state of coma, ushered in at times by a laugh or a smile.

I returned next day, 26th, in the morning, was told that she had slept well; "had one fit about day," blister had drawn well, patient looked more natural, but yet had not spoken but one or two distinct words from the time she was taken; would give no signs of being rational, only by laughing at persons about the house when they would look toward her. I then administered an active cathartic of calomel, rhubarb and aloes; directed, after six hours, to give oleum ricini if she could swallow; if not, to give enemas. It was with great difficulty that we got her to swallow the medicine, as there appeared to be some obstacle in the organs of deglutition—*globus hystericus*.

Returned next morning, 27th; could not take oleum ricini; had given several enemas—no operation. I directed more injections; after the second, she gave signs of wanting to go to stool,—discharged considerable quantities of bilious feculent matter, but no urine. So extremely sensitive was she about the thoracic region, that I was fearful of acute gastritis, which was also the opinion of

a young medical brother, who called in to see her. But there were no symptoms of that malady, only the extreme tenderness, which would not admit the weight of the bed clothing. I then put her on the use of sulphuric ether, camphor, etc.

Returned next day with Dr. G. S. Martin, an old and experienced physician, who directly concurred with the diagnosis, and approved of the treatment I had pursued, and thought, as well as myself, that cathartics, anti-spasmodics, etc., were of no avail; that an emetic would be the best, but after first trying with water we found that deglutition was again imperfect. Directing a strong stimulating liniment to the spine, we left about 10 o'clock A. M.

The following night, about 6 o'clock, she spoke tolerably intelligible for the first time, saying she wanted to see the Doctor, and urging the attendants to send. The messenger was dispatched, and I reached her about 9 o'clock, but found her again in a complete state of coma, and learned that she had had several paroxysms. I succeeded, however, for the first time, in arousing her from the comatose state. She spoke in an indistinct manner—said she was going to die—I need give her no more medicine, &c., &c. It being the first time I could derive any thing from her own language I propounded to her several questions. She stated there was "something in her throat trying to choke her to death;" but all her talk was very indistinct, the words spoken in a semi-articulate manner. I prescribed tinct. assafoet. and spts. nitric ether, left, and returned next morning. I found she had taken only one dose, but that deglutition was then practicable. I then proceeded to administer the treatment first adopted, viz: An emetic of ipecacuanha, 3ss.; ant. ext. potass. tart., gr. 2—dissolved in warm water ʒ6. Give ʒ1 every ten minutes: after the fourth dose copious vomiting ensued. Assisted by tepid diluents, she ejected a great deal of bilious matter; after which she discharged an immense quantity of limpid urine.

After emesis, no tenderness could be detected in the thoracic region: the patient, getting up with an insatiable appetite, went home the next day and resumed her usual avocations; was troubled for a few days with the choking sensation, with occasional singultus, both of which yielded to the use of tinct. assafoet. in combination with camphor.

But the great object of publishing this case has not yet been

told. From the day she was taken, to this, she has not been able to articulate a word plainly. There appears to be a partial paralysis of the tongue, she not being able to raise it to the roof of the mouth, nor can it be protruded more than half the usual distance. What can be the cause of this singular phenomenon, unless it be an injury received in some of the lingual or laryngeal muscles or nerves during those violent fits of screaming? It must be an injury to *some* of the organs of speech received during the *attack*, as speech was in no way impeded *previously*. If any of the older brethren of the profession can give a reason why this partial aphonia or semi-articulation should occur, I would be pleased to hear from them at any time.

The tonsils have been somewhat inflamed and enlarged: this I subdued by external applications. The uvula appears natural, with no elongation. The patient is yet under my care. I have endeavored to regulate the catamenia, thinking she might be relieved were she to menstruate regularly. I used ferruginous preparations; also, aloes, myrrh, guaiacum, tonics, balsam, with a blister to the neck; stimulating plasters and embrocations to the spine, bathing, &c., &c.; none of which appeared to yield any decided benefit. I, however, believe she is gradually improving. The leucorrhoea has subsided, and for the last three or four menstrual periods she has been much better, but not being, as the mother informs me, "of the proper appearance."

She had another attack, similar to the first, in the month of November. I was sent for; could learn of no exciting cause, with the exception that she had assisted in shrouding a little girl the day previous, immediately after which, the *family* thought, she was taken with colic, and was "thrown in her old way." I first used antispasmodics, but with no effect; I then applied a large sinapism to the epigastrium—administered an emetic as before. She discharged large quantities of bilious fluid, which relieved her immediately.

The attack was similar to the first—regular spasmodic paroxysms, followed by a low *moaning*, with no *screaming*; and no doubt that this time mental excitement was a leading cause in bringing back the spasms. She is now up, able to work, visit her friends, &c. The family think they can understand her much better; I can make out but very little of what she says. Her appetite is good, bodily strength as usual, mental faculties as good

as ever, but not being able to speak plainly, makes her somewhat bashful.

The irregular menstruation has, since the last attack, assumed the form of dysmenorrhœa. I am treating it in the usual manner. The patient being in limited circumstances, there is little regard paid to dietetic regulations, besides directions are not strictly complied with. I shall hope, by the assistance of nature, eventually to restore her to her wonted health. I am treating the case pretty much on general principles, not being fully satisfied as to its pathology. I advise her to avoid depressing passions, or mental emotions of any kind. I have been thinking of using electricity. My sole attention is now directed to the improvement of her *general health*.

[We will venture to make but a single remark about the above interesting case, and that in relation to the aphonia. This is most probably due, not to any injury done the organs of the voice, by the violent use of them, but results from injury sustained by the nervous centres at the base of the brain, which give power of motion to the tongue, and muscles of the larynx. This portion of brain was probably put in an apoplectic condition during the violence of the convulsive paroxysm, either by congestion or by a slight extravasation in this particular region.

The case reminds us strongly of a similar one which was some time since under the care of Professor L. D. Ford of this city. A negro girl, aged about 22 years, had been subject to repeated violent attacks of hysterical convulsions, followed by hysterical lethargy. These would return every two or three months. The attacks were generally relieved with much difficulty, emetics, revulsives, and chloroform by inhalation, being the principal remedies employed. The paroxysms, however, was not the Doctor's principal care: to break up the disposition to return employed most of his attention. Tonic and emmenagogue treatment proving of but little avail, he introduced a *seton* in the back of the neck, for in the cervical spine there was great tenderness on pressure.

In a conversation many months afterwards with Dr. Ford, he informs us that his treatment had been perfectly successful in preventing the return of the attacks, and he attributes this happy result mainly to the seton.

The case, the subject of the present report, we think is one well

suiting for the application of the seton, both with the view of preventing any return of paroxysms, and further, because such a form of revulsive and such a permanent drain, would be likely to afford much relief to the embarrassed nervous centres at the base of the brain, which condition of embarrassment, doubtless, causes the paralysis of the tongue.]—EDTS.

ARTICLE XXXIII.

Professor Lawson's Theory of Epilepsy: A Case reported by THOMAS J. REAGAN, M.D., of Alma, Texas.

I notice in the Southern Medical and Surgical Journal, for April, an article entitled "A few thoughts upon Epilepsy," selected from the Western Lancet. In this paper, the writer (Prof. Lawson) proposes the theory that the disease is one of diminished nervous action, and advances in support of his idea, that an intercurrent excitement fever, &c., temporarily suspends epilepsy. This idea of epilepsy being suspended by an intercurrent disease, brings to my mind a case of this malady with which I had to deal.

Miss W——, about 21 years of age, residing in Coweta county, Georgia, had been a subject of epilepsy for several years; the exact time, or how often they recurred, I do not recollect, as I write entirely from memory. She was attacked with remittent fever, for which I prescribed, without any regard to her epilepsy, never having been called to treat that specially. During the progress of the case she became severely salivated. Three years after I learned that she had not had a return of the epilepsy since her sickness. I at that time attributed its non-recurrence to the salivation, but was unable to explain the *modus operandi* by which a suspension of the disease was brought about. But whether it was the salivation or the fever that broke up the morbid chain, or not, I am unable to say. Since seeing Dr. Lawson's article I am led to report the case.

On Scarlatina. A Clinical Lecture, delivered in Paris, by M. TROUSSEAU. (Translated from the *Gaz. Hépdomadaire*.)

Scarlatina is, of all the exanthematous and contagious pyrexias, the most variable in its forms and characteristics. It is also the most variable in relation to the danger the patient undergoes. Variola, whether benignant, discrete, malignant, or confluent, is still variola; you can always recognize it by its special characteristics; it always shows itself exteriorly by appearances which are proper to it, whether modified or not, as it so often is by vaccination or by a preceding variola. Scarlatina, on the contrary, may not appear, and frequently is not apparent upon the skin, yet is none the less severe on this account. Rougeola almost always preserves its characteristics, or very nearly so. Its diagnosis is ordinarily simple, almost always easy; its complications generally foreseen, take place at a certain time, upon a certain day which the physician can foretell. Scarlatina, as we shall see, presents complications most usually unsuspected, which the physician cannot know beforehand, even at a period very near their appearance.

This disease is sometimes so light, that one of the greatest observers of the past, Sydenham, said of it, in speaking of several epidemics he had seen: *Vix nomen morbi meretur*, it hardly deserves the name of disease. But Sydenham has given in his writings only the results of his personal experience, and as he had never seen it in its severe form, he treated scarlatina with that sort of disdain which he was far from having for rougeola or variola. Now, those writers, whom it is proper for us to consult, tell us that for many years the cases of scarlatina they saw were so mild in character that they never saw any body die from it.

Graves, in his clinical lectures, states that in 1800, 1801, 1802, 1803 and 1804, scarlatina ran through Ireland and was very fatal; that from 1804 to 1831, those physicians who had found it so very destructive during the years we have already cited, no longer witnessed a death from this affection, which had become singularly mild. In 1831, a new epidemic of severe scarlatina appeared in Dublin and vicinity, and in 1834 this disease spread over Ireland a sadder gloom than did the typhus a few years later, or the cholera two years before. When I commenced my medical studies at Tours, M. Bretonneau told us that scarlatina, which his masters had always spoken of as a severe disease, had at first appeared to him as a very mild disease. He said that from 1799 to 1822, at which time he made these remarks, he did not recollect to have seen a single person die from scarlatina, and he had practised for a long time in the country before he became physician-in-chief of the hospital at Tours. Since then he had seen numerous cases, both in hospital and private practice, and up to that time

this exanthematous pyrexia was to him the mildest of all. But in 1824 an epidemic broke out in Tours and its vicinity. In less than two months M. Bretonneau saw the sick die off with such a startling rapidity, that, opposed as he was to the doctrines of Broussais, then in high estimation, he accused the treatment pursued by his confrères, who bled excessively (à l'outrance) in order to moderate the angina and the inflammatory fever at the commencement of the attack; soon, coming himself in contact with the disease, he learned that he could not always strive against it with advantage, a considerable number of his patients succumbing. Then, he who before 1824 had treated scarlatina so lightly, learned to class it with the plague, with typhus and cholera.

For more than a quarter of a century, then, scarlatina reigned epidemically without presenting any gravity. Suddenly its character changes; it strikes those whom it attacks most cruelly. It is not thus with rougeola, it is not thus with variola. Doubtless the epidemics of rougeola and variola are sometimes very severe, but they are never so generally light or severe as those of scarlatina. For scarlatina the epidemic type is more dominant than for the others, and according to the nature of this type the disease is extraordinarily simple or singularly severe.

What is the duration in scarlatina of the *period of incubation*? In an exanthematous fever, nothing is more difficult to fix when the virus is not directly inoculated, nor is there any thing more variable than the manner in which this question has been decided. For scarlatina, some say that the incubation continues four days; others eight, and others again fifteen, twenty, and thirty days. In a word, only hypothetical data have been given, because those who made them would not see that no certainty was possible unless a precise date of the commencement of the incubation was assigned. But one pyrexia only can furnish us this precise time, variola, because it is inoculable, and since this inoculation has been performed for a half a century and very extensively throughout Europe. We have been able to ascertain positively the time which intervenes between the moment when the virus is introduced under the skin and the manifestation of the disease. In this manner the duration of the incubation of variola has been fixed. It is not so with the other exanthemata, which have not been inoculated, and which perhaps are not inoculable. For then, in default of inoculation, the moment the individual was placed in contact with another person affected, is taken as the point of departure for the incubation; but contact and incubation are two different things. For example, five hundred sheep are placed together in the same park, or in the same sheepfold, one of them takes the rot, an eruptive disease in animals, analogous to variola in man. Fifteen or twenty days later seven or eight more sheep are taken, and each day successively a few fall sick; four months would have to pass before the last would be attacked. Yet all

these animals, shut up in the same place, breathing a confined air, pressed against each other and wet by pus from the sick, were not taken at the same time; some were attacked sooner, others later. Would you conclude from this that the duration of the incubation was longer in some than in others? Not at all, for inoculation performed the same day in all, the disease would also show itself the same day in all without exception. Contact and inoculation, then, are essentially two different things. By inoculation the virus is necessarily introduced into the economy; by mediate or immediate contact, the absorption of the virus does not always take place. When this absorption once takes place, the *evolution* of the disease takes place in a certain determined time, the same, within a few hours, or a few days, in all.

Well, that day when scarlatina shall be inoculated, the duration of the period of incubation will be fixed for it, as has been done for variola, until then it is impossible to determine it. In a family composed of ten persons, five weeks will sometimes elapse before all will be taken. It will be the same with them as with the sheep of which I have just spoken. It does not result from the fact that they have not come in contact, but that they have been in different conditions to be affected by it. It is the same as with syphilis. The syphylitic virus methodically inoculated produces after a certain number of days the evolution of a specific vesicule, and this number of days is very nearly known. Several persons may have connection with a diseased woman, some would take the disease immediately, while others having relation with her several days in succession, would become diseased only the last day. This happens from the fact that the first were in physiological or pathological conditions such that from the first contact the virus was inoculated, while the second were not in this condition till later.

Finally, gentlemen, the period of incubation in scarlatina, that is to say, that period comprised between the precise time of the inoculation of the scarlatinous virus, and the precise period of the first manifestations of the disease, that period in scarlatina, cannot be rigorously determined. The same remarks are applicable to rougeola, they also apply to variola when it is not directly inoculated.

In scarlatina the period of invasion is also undetermined. You know how it occurred in variola, and you can affirm that in regular cases of small pox, when you see the eruption appear forty-eight hours after the commencement of the invasion, the variola will be confluent, because it is at the end of the second day, or at the commencement of the third that the pustules appear in this form of the disease; if the pustules appear about the fourth day, you will diagnose a discrete small-pox. Seldom is the eruption of the confluent variety put off till the fourth day; seldom does that of the discrete form appear as soon as the second day.

These characteristics of variola which are almost positive, give you the ability of immediately saying whether the disease will be severe or mild. Let me be well understood, I speak only of regular variola, and not of modified small-pox or varioloid, the characteristics of which are not the same.

In scarlatina the progress is different. In some patients the eruption appears during the first four or five hours of the fever of invasion, rarely later than the first day. It is still rarer, except under complications, that it is deferred to the second day, and for the same reason it is still rarer that it appears only until the third day. Although a few physicians believe that they have observed this appearance as late as the third day, I repeat it, that this fact is extremely rare. I do not deny its possibility in an absolute manner, according to my belief, however, it is because the attention of the patients was not called to it, or because it was not sought for in a great number of cases. In general, it is upon the face that we first look for the febrile exanthemata, because it is there that it first shows itself. It is so for rougeola and variola, but it is not so for scarlatina. In this disease it is more particularly upon the body, upon the fore arm, upon the belly, or in the folds of the thighs that the eruption first appears, so that it can exist twenty-four to thirty-six hours before it makes its appearance upon the face or neck. We may think that it only commenced then, when in reality it had existed some time. But when we are informed of the progress of the disease, this error is easily avoided. In fact the period of invasion in scarlatina is extremely short.

The *phenomena which characterize it* are ordinarily a high fever with or without a previous chill, most frequently this chill is absent. The frequency of the pulse is considerable, more so than in the other febrile exanthemata. This fact is important, for in studying scarlatina in its elements, in speaking of scarlatina without eruption we shall see that under a good number of circumstances we shall make out our diagnosis of this disease by the single consideration of this extreme frequency of pulse, which is not found in the other affections which may be confounded with scarlatina in part *effaced*, if I can make use of this expression. To this fever is added cephalalgia, a general *malaise*, anorexia, vomitings, diarrhoea, oftentimes very abundant. Almost always from the moment that the fever appears, the soreness of the throat also appears, so that from the commencement of the affection, before many hours have passed, the patient complains of pain in that region, he speaks of it as the most prominent symptom of all he feels, and it is to that he calls your attention. This phenomenon is a very important one to be studied, because we may be deceived by it, for this angina may be mistaken for a simple angina, and an improper treatment be adopted, or at least one insufficient for a malignant scarlatinous angina. The tongue pre-

sents the first day nothing particular, it is feverish—that is to say, covered with a fur a little slimy, slightly red at the point, and upon the edges, but upon the palate a deeper red is observable and in some cases already presenting a dotted appearance. This redness is very marked upon the tonsils, which are slightly swollen. This redness, this dotted appearance of the veil of the palate, of the tonsils without marked tumefaction, accompanied with severe pain and intense fever, should put you on your guard, especially when an epidemic of scarlatina prevails, and should cause you to suspect a scarlatinous angina.

When scarlatina is malignant, the symptoms take another form. The frequency of the pulse is still greater, reaching as high the first day in the adult as 130, 140, 150, 160 pulsations, even before the eruption has appeared upon the skin. At the same time the nervous system becomes affected, showing itself by a great agitation, or by a sleeplessness which nothing can overcome, almost always by a sub-de-lirium when the patient is left to himself. These are symptoms very rare in simple sore throats, very rare also in the commencement of other febrile diseases. From the first day, from the first hours, malignant scarlatina announces itself with all its malignancy, and this malignancy may be such that the patient succumbs before twenty-four hours pass.

I was called by my friend, Dr. Bigelow, to see a young American girl in a school in Paris. She had been affected since morning by an alarming delirium, she had an intense fever, and incessant vomitings; the pulse was so frequent that it could not be counted, the skin was remarkably dry. These phenomena caused me to say, when we reached the bedside of the patient, that it was scarlatina, and in fact, although nothing else demonstrated its existence, my diagnosis was confirmed by the presence of the characteristic eruption upon another young girl of the same school, where an epidemic of scarlatina prevailed. Our patient died before the end of the day.

In 1824, at the commencement of that disastrous epidemic which broke out in Tours, of which I have spoken, we saw, with M. Bretonneau, a young woman die in less than eleven hours, with terrible symptoms, delirium, excessive agitation, extraordinary frequency of pulse, and nothing indicated scarlatina to us, excepting that we were in the midst of an epidemic, and that many persons in the family of this young woman had had it.

Beware then, when in the midst of an epidemic of scarlatina, when especially persons around a patient to whom you have been called have already been attacked by it; beware of those nervous symptoms which show themselves thus at the commencement of disease. Almost always they announce a malignant scarlatina, and this almost always kills with an astonishing rapidity.

I dwell upon this point because it can give rise to the most serious errors in diagnosis; because it can give rise to faults in

prognosis, most serious to the reputation of a physician. Do not forget these precepts, and when you find yourself in presence of the symptoms of which I speak, be reserved, for these symptoms may terminate rapidly in death; they seldom show themselves so severe in rougeola, and never in variola.

In scarlatina, then, there is an uncertain period of incubation, a very short period of invasion, after which comes *the eruption*. This new period has a duration not as clearly determined as it is in rougeola, and especially as it is in variola, in which it is so easy to calculate it. Commencing from the first day of the disease, the eruption of scarlatina is sometimes apparent the twelfth and the fourteenth day, although ordinarily it begins to disappear towards the eighth. In the simplest cases it continues from five to eight days. What are its characteristics? When you consult your books, it would seem from them that a physician should not hesitate in making out his diagnosis. Rougeola, says one, consists in an eruption of small, isolated spots, of irregular form, leaving between them intervals of white skin. Variola is recognized by its small acuminate papulæ, becoming vesicular the second day, pustular the third, pointing and becoming surrounded about the eighth day with an inflammatory areola. All these facts are very simple, and these characteristics so well designated, that they should not be mistaken. As to scarlatina, its characteristics are still better marked; a diffuse, wine-like coloration. The descriptions are far from giving exactly that which exists in all cases. You see, in fact, cases of rougeola, and I have shown you some of them, which present an eruption, diffuse, uniform, without red spots, isolated by intervals of white ones. In truth, this form of the eruption is not the rule, but it does exist.

In contradiction to this you will meet with cases of discrete scarlatina, and even cases of confluent scarlatina, in which the eruption will be in certain points, composed of red spots, and still better, by small rounded, red points, perfectly isolated from each other, not having the wine-like, the raspberry color which has been attributed to it. It differs, however, from the eruption of rougeola, yet may sometimes be confounded with it.

What also distinguishes scarlatina, is the presence of a miliary eruption, which very often accompanies the redness of the skin, and which is met almost invariably when the scarlatina is very slightly confluent. It appears upon the sides of the neck, upon the chest, upon the bowels. It is known without seeing it. By passing the hand over these parts, small elevations are felt, which give the same impression as goose flesh. Searching for them, then, a multitude of small vesicules will be perceived, which, after thirty-six or forty-eight hours, are filled with a lactescent fluid.

As to the eruption of scarlatina itself, it is not really of an uniform tint, like erysipelas, but of an infinite series of little elevations of the skin, resembling an extremely fine eczema. They

are recognized by the touch, and by the magnifying glass this disposition is very evident.

The redness exists, at its greatest intensity, upon the neck, upon the chest, upon the bowels, and the internal surface of the arms and thighs. It appears about the same time everywhere, although it is most frequently seen upon the neck and chest, before it shows itself upon the countenance. Upon the face it has not the same characteristic as upon the body. Of a speckled appearance, of a deep red in some points, adjoining white spots, the skin of the face seems as though it bore marks of the fingers, with which it had been severely struck. At the same time it is swollen, and this puffiness is also observable in the hands and feet. It takes place the instant that the eruption appears, increases with it, and is consequently more marked the second or third day. In the hands it interferes with the movement of the fingers, which the patient can fold only with difficulty, and it can easily be proved to the sight. Progressing with the eruption, it usually disappears with it, as well from the face as from the extremities. It remains for a while at the angle of the jaws, upon the neck, and these regions are painful to the touch.

Examine the throat of the patient, a deep color and tumefaction of the veil of the palate, and of the tonsils, is seen; very often these present small whitish concretions, the first manifestation of the membranous angina of scarlatina, upon which I shall have to dwell.

The appearance of the *tongue* is such, so specific, that by it alone the disease can be distinguished. Neither in rougeola nor in variola, will you find that appearance which the tongue takes in scarlatina, a characteristic as special in this exanthematous fever, as is the varolous eruption of the mouth in variola. The first day the tongue offers nothing special, other than the more or less thick slimy fur, more or less white, of a yellow or greenish color when the patient has vomited; nothing more than the slight redness of the point and edges, of which we have already spoken. The next day the redness increases in intensity and extent; it increases the third day even, and towards the fourth or fifth day the thick fur has more or less completely disappeared; the whole tongue is of a bright red color, tumefied, presenting a considerable elevation of the papillæ, which gives to it an appearance analogous to that of a strawberry. It is deprived of its epithelium, and in some cases you can assist this work of desquamation, you can even hasten it, by rubbing the tongue with a piece of cloth. This is an invariable phenomenon in scarlatina, at least when the affection has not been marked by any febrile phenomenon. There is nothing analogous to this in rougeola, nor in variola, even when this is accompanied by stomatitis. Towards the seventh or eighth day, still preserving its red color, the tongue becomes smoother, and towards the eighth or ninth day the epithelium is renewed in

a very apparent manner, at first excessively thin, but towards the twelfth day it has nearly regained its natural thickness; but the mucous membrane remains a little redder than in the normal condition.

The phenomena which attract our attention the most in scarlatina, are the *nervous symptoms*. It is proper to say that their intensity in this disease is so special, that they alone, in a great many cases, will suffice to separate it from any other exanthematous fever. Never, or very seldom at least, is rougeola announced by any severe cerebral symptoms, with the exception of eclampsia; and as in fact it is only in this respect that any possible confusion can be made between rougeola and scarlatina, the intensity of these symptoms alone establishes a capital difference between these two diseases.

They are present from the beginning; from the first day they exhibit themselves by *delirium*. This is not the case in mild scarlatina, but in its severe form it is seldom absent. When the disease is serious, it is as well marked as in the most severe typhoid fevers; it appears with the eruption, persists until the period of desquamation, or more correctly speaking, until the fever falls.

Delirium is not the only manifestation of nervous disorders; they are also shown by *carphologia*, *jactitation*, *coma*, and in some cases by *coma vigil*; in a word, all the forms of typhoid nervous symptoms are met with.

In infants it is not uncommon to witness *attacks of eclampsia* in the first two or three days of the disease. The convulsions have, however, a very different character, as regards their seriousness, than have the initial convulsions of rougeola and variola; for while those of variola are considered by certain authors, Sydenham among others (whose opinion I do not partake), as being of a favorable augury,—while the initial eclampsia in rougeola is generally regarded as a symptom of very slight value,—the attacks of eclampsia occurring the first or second day in scarlatina are, upon the contrary, of great gravity. This gravity is still greater if they arise in the third period of the disease, when there is general oedema; we shall have again to speak of its signification; we shall have to say that then the convulsions are often fatal symptoms.

Even in adults examples are not wanting. Epileptiform symptoms appear the second or third day of the scarlatina, in those persons particularly, who have been subject to attacks of epilepsy, these initial convulsions are repeated, coma succeeds, and death comes in the first twenty-four hours after their appearance.

There is still another marked nervous phenomenon of a very bad prognostic. I speak of dyspnoea, which is, however, not attributed to any material lesion of the lung, a dyspnoea which is met with its mournful signification in a great number of septic diseases, in puerperal typhus, the typhus of camps, in cholera, etc.,

dyspnoea which you have been able to witness in that woman recently delivered, who was so suddenly carried off by scarlatina.

Independently of these disorders inherent to the disturbances of cerebral and spinal innervation, there are others which are allied to perturbations sustained by the ganglionic system, and which I shall point out to you.

You, doubtless, are acquainted with the wonderful works of M. Claude Bernard, upon the section of the ganglionic nerves; you know that this section produces in the parts to which the filaments of nerves are distributed, not a paralysis, but, on the contrary, an exaggeration of certain functions, particularly of calorification and of secretion. The learned Professor of the College of France has shown you how, by cutting the sympathetic filaments which go to the ear and face of the rabbit, an elevation of temperature is produced in these parts, which may rise from 4 to 5 degrees higher than the normal temperature; he has shown you that by cutting the ganglionic nerves of the coronary plexus, considerable hypersecretion of the gastric mucous membrane results. From these experiments you will draw the conclusion, that each time that calorificity is increased in an animal, there will be reason to infer some disturbance in the ganglionic nervous system, rather than in the functions of the cerebro-spinal system. But there is certainly no disease which is accompanied by a general elevation of temperature as high as scarlatina. In those affected with scarlatina, in fact, the thermometer introduced into the rectum, or placed in the armpit, has marked 40 to 41 degrees centigrade. This elevation of temperature can only be explained by the disturbances in the ganglionic innervation, which are also shown in other functions, under the subjection of the grand sympathetic, as the incessant bilious vomitings which persist in some persons four, five, and six days, and the abundant intractable diarrhoeas. Graves had pointed out this polycholie in scarlatina independent of any phlegmasia.

The non-inflammatory nature of these symptoms it is important to note. If, in fact, impressed with the idea of inflammation, which the heat of the skin seems to indicate, you endeavor to combat the diarrhoea and the vomitings by antiphlogistics, you will adopt the worst medication, in fact the most perilous treatment that can be adopted for scarlatina, for of all the eruptive fevers, scarlatina is the last one which requires this kind of treatment, seldom beneficial in rougeola or variola.

Besides the nervous symptoms which I have just indicated, others arise, sometimes at the commencement, rarely, it is true, at this period; these are hæmorrhages—hæmorrhages from the mucous membrane, subcutaneous hæmorrhages, renal hæmorrhages. These hæmorrhages belong, however, rather to the third period of the disease, and we shall see that in its declination hæmaturia in particular, coincides frequently with the anasarca of scarlatina, of which I shall have to speak.

In studying the relation existing between the severity of the disease and the intensity of the eruption, it will be seen that certain authors have committed a great fault in this respect, and the greater because they may lead into error those physicians who are not familiar with scarlatina. They say, in fact, that when the eruption is well developed, very bright, or, to use a vulgar expression, *well out*, the patient runs fewer chances of having any serious symptoms. Well, it should be said of scarlatina what is said of variola, its severity is in direct ratio with the intensity of the eruption. In a discrete scarlatina the danger is ordinarily less than in confluent scarlatina, as in a discrete variola there is less to fear than in a confluent variola. In both of these exanthemata, the more intense the eruption, the more serious the symptoms and the greater the danger. Such are the facts established by observation during the course of epidemics.

Scarlatina, I have insisted, does not even resemble itself; identical, be it understood, in its essence, it is not so in its forms. In some cases, after ten or twelve hours of fever, an insignificant eruption appears upon the neck and body, and two or three days afterwards this eruption and the fever which attended it have disappeared, the patient has hardly felt sick, desquamation goes on, it takes place by little bands, then after five to six days the disease is cured, and if the patient does not expose himself to cold, or commit any imprudence, it passes entirely off. The disease has been so *simple*, that in certain families it passes unnoticed.

Between this mild form and that more severe form, the outlines of which I have already traced for you, there are intermediate forms. Malignant scarlatina, I have told you, becomes a terrible scourge, equal to the most fearful pestilential diseases.

I now come to speak of a few particular symptoms of scarlatina, which I have indicated *en passant*, and which it is necessary I should dwell upon more in detail.

And first, of the *angina of scarlatina*.—[*Am. Med. Monthly*.

[To be continued next month.]

On Hæmaturia after Scarlet Fever. By WM. R. BASHAM, M. D.,
Physician to the Westminster Hospital, and Lecturer on the
Practice of Medicine.

HÆMATURIA AFTER SCARLET FEVER; ANASARCA; PULMONARY
AND CEREBRAL COMPLICATIONS; CONVULSIONS; DEATH.

If further proof were necessary, to establish the doctrine that the morbid sequelæ of scarlet fever are to be traced to the imperfect elimination of the original virus, it might be found in cases in which the morbid symptoms of this secondary stage are not limited to renal disturbance, but where serious complications, both of the cerebral as well as the respiratory functions, co-exist. In these

cases, where cerebral symptoms become developed during the presence of general dropsy, the urine being highly albuminous, with abundant exudation of the renal epithelium, there can be no hesitation in attributing the convulsions, coma, and death, to uræmic poisoning. The symptoms are strictly analogous to one form of cerebral disturbance frequently observed in cases of renal degeneration in adults, in whom the function of the kidneys is limited to the excretion of the water and albuminous constituents of the blood, and fails to eliminate the urea, the retention of which, acting as a poison in the blood, manifests its virulent power by the most fatal indications. It might therefore be assumed that these symptoms are referrible rather to the renal incompetency than to the febrile poison. Proximately, doubtless they are so; but it has been already shown in a previous lecture that the incipient stage of the renal disorder, the congestion, the hæmaturia, are not accidental conditions, but arise undeniably from the secondary effects of the original febrile virus. There can be no difficulty, then, in tracing the convulsions and fatal termination as much to the imperfect elimination of the scarlatina poison as to the intensity with which the system was in the first instance impregnated.

CASE.—Adolphus L——, aged six, was admitted into Burdett ward Feb. 10th. The child is reported to have had scarlet fever about a month since, and he has been attending as an out-patient for the last three days, but the gravity of the symptoms rendered him a fit object for admission. There is a considerable degree of constitutional disturbance, febrile heat of skin; pulse rapid; the tongue red, and inclined to become dry; the whole surface of the body is anasarcaous; the face is pallid, sodden, and puffy to a great extent under the eye-lids; the scrotum is much distended and the prepuce ecœdematous; no indication of ascites. There is a purulent discharge from the left ear. The chest is moderately resonant throughout, but there are coarse moist mucous murmurs all over the left side, and with considerable bronchial wheezing on both sides; the respirations are 24; the pulse 96; frequent cough and fits of dyspnoea; heart sounds natural. The urine is moderate in quantity, smoky in appearance, specific gravity 1.014, abundantly albuminous. The mother states that for several days in the previous week the urine was of a blood-red colour. The urine, examined by the microscope, exhibited many free blood-corpuscles; much amorphous granular matter, stained with hæmatin; and numerous fibrinous castes filled with blood-discs. Warm baths were ordered; the compound jalap powder, as a purgative; and saline medicine, with three drops of the tincture of digitalis to each dose. Two days afterwards the urine remained the same in quantity, but became much higher in specific gravity, 1.020. Free purging with the compound jalap powder was established on the 15th, with great advantage to the symptoms, the skin becoming cool, and the tongue less red and moist, the patient eagerly taking

the farinaceous food prescribed. There was also considerable diminution of the œdema of the prepuce and scrotum, although the face still continued puffy.

Ten days after admission the urine became more copious; the smoky appearance had given place to a clear amber-coloured urine, of a specific gravity 1·007, and copiously albuminous. On adding nitric acid to the heated urine, the colour became first of a bluish green, and subsequently greenish black. I shall hereafter direct your attention to the nature of these pigmentary alterations in albuminous urine. They are of occasional occurrence in the progress of renal degeneration, and, so far as my experience teaches me, are conditions of very unfavourable significance. The pulse continuing good, and the appetite improving, the bowels acting freely with the cream-of-tartar purgative, the potassio-tartrate of iron was ordered.

On the 8d of March, three weeks after admission, he was sitting up in bed, and is reported to have improved somewhat in appearance; the face being, however, still œdematous, particularly in the morning. The quantity of urine passed in the twenty-four hours had notably increased, but without any corresponding diminution in the anasarca of the surface, although, as compared with the week previous, the dropsy had much decreased. The specific gravity of the urine was very low, 1·005-6, and the quantity of albumen seemed increased, as its coagulation by heat rendered the contents of the tube nearly solid. Examined under the microscope, numerous castes of the tubes were visible, partly transparent, containing, however, epithelial cells, highly granular in appearance, with many scattered fat granules; there was also much free granular matter in the field. On this day, soon after he had taken his dinner of beef-tea and rice-pudding, convulsions suddenly came on; they were of the type of those intermitting movements so frequently seen produced by dentition or intestinal irritation; constant jactitation of the limbs, with rolling of the head on the neck. These continued for several hours, with only slight intermissions; the pupils were dilated; the breathing was laboured and quick; the pulse 110 to 120. Purgative enemata, and mustard poultices to the lower extremities. The convulsions returned in paroxysms during the night, and in the intervals the patient was quite comatose, with stertorous breathing; the urine and fæces passed involuntarily, and the child died at 2 P. M. on the 5th, forty-eight hours after the first convulsion. Unfortunately no post-mortem examination was permitted.

We have no information that can be considered satisfactory of the earlier stages of this child's illness, beyond the fact of its having had scarlet fever. Whether the eruptive period was distinguished by any untoward symptom, or whether desquamation of the cuticle followed, cannot be ascertained, as the mother seems to have paid no attention to these points. That the secondary affec-

tion was characterized by symptoms of unusual severity, the state of the child on admission very plainly testified, and it is to these symptoms I would specially direct your attention. First, the degree and character of the febrile disturbance; secondly, the renal and pulmonary complication; thirdly, the cerebral conditions and sequel. The fever was less of the asthenic type than is usual in these cases; it was more expressive of irritative action, such as usually accompanies local or regional inflammation; nevertheless, the dropsy and pallid look forbade any general or topical depletory measures. The state of the urine, the physical signs within the chest, each told of congestive conditions—formidable obstructions to the purification of the blood by respiration on the one hand, and of its depuration by urinary excretion on the other. What principle of treatment is to guide us in such complex states?

If I may sum up in a few words the broad fundamental, therapeutical principles in such cases, I would say, we must endeavour to bring into activity and act upon those functions and emunctories which are not, or only in a moderate degree, implicated in the morbid disturbance, and by their agency relieve, if possible, the oppressed and impeded organs. Thus, though the surface of the body is anasarcaous, we must endeavour to promote its exhaling power; and as the intestinal mucous surface gives no indication of sharing in the morbid state of the kidneys, we must bring its secretions into activity to purge the system of the accumulated fluid, and vicariously, for a time, relieve the kidneys of their office. The intimate sympathy between the kidneys and skin, and between the latter and the bronchial mucous membrane, when the latter is the seat of inflammation, would entitle us to expect the most beneficial results by vigorously promoting the cutaneous function; but unhappily, in these cases, the dropsical state of the surface of the skin precludes our obtaining much efficient aid in this direction. Warm baths effect oftentimes great temporary relief to the lungs; the breathing becomes less oppressed, and the secretion from the bronchial tubes more free; but the hot-air bath appears to be the most efficacious; there is not that exhaustion which is induced by a succession of warm baths, and, to my observation, the amount of relief felt by the patient is greater. To aid these external appliances, ammoniacal salines may be given internally with advantage. Active purging, however, yields the best results. It is, however, of importance to select appropriate means to obtain the greatest amount of relief, for it is not every purgative of the pharmacopœia which answers this purpose equally well. That purgative which acts most directly as a hydrogogue is the best adapted, but which, at the same time, is not followed by any disproportioned exhaustion, or by any torpid reaction. The combination of jalap and cream-of-tartar is most admirably suited to these ends. It acts quickly, without depressing the system, is not followed by inactivity, and induces copi-

ous watery dejections. This patient was much benefited by these purgative remedies: the febrile state was lessened, the tongue became moist, and doubtless, from the amount of fluid drawn away by the cathartic, may be explained the great increase in the specific gravity of the urine. There was manifest abatement of the dropsical condition, and the breathing was easier and expectoration more copious. Continuing this plan of treatment, the improvement became sufficiently pronounced to justify the administration of chalybeates. At the same time, the state of the urine revealed by the microscope, together with the appearance of that peculiar pigmentary condition observed in combination with the albumen, suggested a very unfavorable prognosis, although I was not without hope that the renal degeneration had not reached that stage at which ultimate, though remote, recovery might be possible. The casts of the tubes were partly transparent, partly granular. The few epithelial corpuscles visible within the tubes were filled with fat granules, and the tubes contained many scattered fat granules; highly refractive, and completely removed by ether. These microscopic conditions indicate an advancing stage of degeneration, and if spread through both kidneys, must be quickly followed by an imperfect elimination of the chief urinary constituents; and this was evident by the singularly watery state of the urine, its specific gravity not exceeding 1.005, but containing abundance of albumen, and this latter associated with a peculiar pigmentary matter, rendered visible after boiling by the addition of nitric acid.

It would be out of place here to enter into an investigation of the nature of the pigments that are occasionally met with in the urine, cyanurin, melanurin, &c. Experience tells me that the development of this pigmentary condition, in combination with albumen in the urine, is of the gravest import. It is always associated with the most advanced stage of renal degeneration, and in every instance in which I have seen it, it has been quickly followed by fatal results. Lehman, in his "Physiological Chemistry," (vol. ii., p. 428,) says, as far as his experience goes, it is only when uræmic symptoms have manifested themselves, that this peculiarity of the urine is generally observable, and this entirely coincides with my own. We should not then be unprepared for the development of unfavorable symptoms whenever this peculiarity of the urine is observed; so that notwithstanding the apparent improvement in the child's condition, even to the diminution of the dropsy of the surface, I expressed my fears at the time that this hopeful state would be but temporary. And surely nothing can exhibit the value and importance of frequent examination of the urine in such cases more forcibly than the fact here obtained, and the unfavorable inference deduced. In all other respects there was an apparent amendment, and if we had based the prognosis only on the general aspect of the patient, we

might fairly have inferred that all was going on well, It is not of less importance in hospital practice than in private, nor is it less necessary amongst the poor than amongst the rich, to be explicit and candid in the expression of our fears or hopes to those anxiously interested in the welfare of the patient. It is as much the office of the physician to allay anxiety where that can be done with prudence, as it is his more distressing, but not less imperative duty to disclose his worst apprehensions, especially when he sees expectations of amendment cherished, which experience teaches him will be but temporary, and which must soon give way to less equivocal signs of approaching danger.

In the present instance, I believe the warning given to the mother was unheeded; the amendment was so palpable to her, that she would not believe but that our unfavorable opinion was mere conjecture. You may learn an important point here—namely, the suddenness and abruptness with which the symptoms of uræmic poisoning oftentimes commence. In some cases, particularly in adults, the indications are progressive; but here all other things being promising, convulsions suddenly supervene; they intermit, but coma characterizes their remission, and the patient dies forty hours after the first indication of the urinous poison acting on the nervous centres. You may very probably ask,—Can nothing be done in this crisis?—Are there no remedies available for such a state? These cases of convulsion are not always fatal; sometimes in the intervals, consciousness returns. Such cases offer a better prospect for remedial agents than where the patient remains comatose. In either state, however, an effort should be made to excite the bowels to active excretion. Enemata containing, according to the age of the patient, half a drop or a drop of croton oil, should be administered; and where the ability to swallow is unimpaired, you may expect some benefit from the chlorine mixture, the agency of which, according to the hypothesis of Frerichs, depends on its union with the carbonate of ammonia, into which the urea in the blood is converted, and which he considers to be the poisonous agent in these cases of fatal uræmia. I have in vain sought for proofs of this doctrine, but whether the hypothesis be true or false, clinical experience tells me that much benefit is often derived from chlorine administered in the form constantly employed by me.—[*London Lancet*.

On the Therapeutic Use of Oxygen. By S. B. BIRCH, M. D.

In venturing to call professional attention to the subject of this paper, I may safely premise with the remark, that it is one respecting which there exists great diversity of opinion and very little practical knowledge. The therapeutic use of oxygen gas, either alone or as an adjunct, in various intractable cases, is a subject of

vast importance to my professional brethren, enhanced in value as it is by an impartial reflection upon the still very uncertain and very unsatisfactory state of our knowledge of medicinal *modus operandi*. Thus far, excepting to a few individuals, and to a very limited extent, this gas, although so well known in its physiological relations, has been practically little better than a "secret" in its therapeutic bearings. Notwithstanding that from the time of Dr. Beddoes and Sir Humphry Davy several practitioners have made successful trial of oxygen in private practice—notwithstanding that the researches of modern chemistry have made us more scientifically cognizant than formerly of the relations of oxygen to the other elements of the vital organism, and the transformations which determine the pathological conditions of that organism—notwithstanding that the daily observation of every man who has disease to treat shows him that the patient needs plenty of pure air, more air (in other words more oxygen) than he can possibly obtain under many circumstances and in many diseased states from the atmosphere around him—the idea seems merely to float through the professional mind, without any resulting general endeavor to make a practical application of it.

It would not be difficult to show cause why the use of this remedy has been neglected. It involves some trouble and loss of time to the practitioner, and consequently the very want of practical knowledge still existing may be justly attributed to the neglect to carry out fair trials on a sufficient scale in practice. Thus the profession has been led to overlook or ignore oxygen as a medicine, even though chemical science tells us decidedly that it ought to be a most valuable remedial agent. A single trial, or several trials on several patients, are no evidence, if they fail, against its value; they are only proof either that it was not suited to the case, or that it was not properly exhibited. Drs. Beddoes, Thornton, Hill, and others, who have tested this gas in a sufficiently large number of cases, afford conclusive evidence that it is a powerful therapeutic; while occasional experiments in which it has been unsuccessfully tried, can only be accepted as proof that, were we to seek an "universal panacea," oxygen is not that remedy. True, medical science will learn to value it at its intrinsic worth only when it is allowed to have a fair and sufficiently extensive trial.

That oxygen may be exhibited with the success which it merits, much valuable time must necessarily be devoted by the physician; in consequence few practitioners have hitherto had the patience to use it even in a limited number of cases. And here I may venture the truism, that *confidence* in any medicine can be acquired by men of judgment only through the medium of ample experience. The limited amount of practical acquaintance with oxygen, as a therapeutic, at present in the profession, has been forced on my mind by the variety of opposite opinions that have been ex-

pressed. Some of my brethren express their firm belief that it "must be an injurious excitant or stimulant;" others, taking a precisely contrary view, somewhat contemptuously observe, "It is, I suppose, just like taking a little more fresh air, it can do neither much good or much harm;" others, again, join issue with me on the presumed "too rapidly destructive metamorphosis of tissue" in attenuated subjects. Very many have serious misgiving as to the gas setting up pulmonary inflammation; while one eminent physician told a patient of mine that the Almighty had given us a certain per centage of oxygen regularly to breathe—*ergo*, there could be no necessity, under any circumstances, to increase that quantity. Other opinions I could name, but the above will suffice. As a rule, I may say, that *οἱ ἀπείροι* ignore oxygen as a worthless remedy, founding their opinions upon former failures; *οἱ πολλοί* with few exceptions, have never heard of its having been tried and found wanting, but entertain a general belief, when induced to reflect on the subject, that it ought to possess valuable but, to their minds, undefined curative properties. Even Dr. Pereira himself, in the last edition of his "*Materia Medica*," concluded his remarks upon the therapeutic action of oxygen in these words: "On the whole, then, I believe oxygen to be almost useless as a remedy." Thus prestige and authority are decidedly hostile to this powerful remedial agent.

In this paper it is not my intention to enter into the details respecting the chemical actions of oxygen upon the organism, and its highly important relation to the vital dynamics. I hope shortly, however, to throw out a few suggestions for the consideration of my superiors in the *scientific* world.

Meanwhile I will content myself with asserting, as the result of considerable experience and close clinical observation, that an increased supply of oxygen to the system may become, under different circumstances, exciting, depressing, sedative, tonic. Each patient must be treated according to peculiar characteristics of temperament, diseased conditions, long or short continuance of disease, existing and changing symptoms; and the effects of the treatment must be carefully watched. No practitioner must expect full success *at first*, if he be induced to make a trial of oxygen in difficult and intractable cases. As obtained formerly with myself, he may for some time meet with much disappointment; and he may probably discover the necessity of extended clinical experience with the gas, before he will feel himself able to administer it with justice to the patient, to himself, and to the remedy. Every thing depends upon minute details; while not unfrequently much judgment and practical knowledge of this therapeutic are requisite for the due selection of medicinal and dietetic adjuncts.

Having for some time extensively employed oxygen in my own practice, and now feeling myself in a position to adduce some practical evidence not without value, I hope to offer occasional

clinical facts and remarks, which may prove of some little service in the highly-important, but imperfectly-explored, prairie of therapeutics. Subjoined are two cases:—

S. B——, Esq., aged thirty-three, unmarried, of temperate habits, of nervo-sanguineous temperament, with some hereditary strumous tendency, had been the subject of secondary syphilis for seven years, and had undergone a variety of fruitless treatment. Amongst other measures, he had, under the best advice, been subjected to several courses of mercury, iodide of potassium, sarsaparilla, nitric acid, cinchona, and all the most approved means usually employed in treating such cases. Finding himself rather worse than better, and coming to the sad conclusion that his constitution had become terribly shattered, quite as much from the mercurial treatment as from the original disease, he resolved, by the advice of a friend, to place himself at a hydropathic establishment. Here he underwent such severe treatment that he was compelled after some weeks to give it up, owing to increased general weakness and exhaustion of his vital powers, with tendency to ulceration of the legs. He now consulted several eminent practitioners; went through a repetition of iodide, cinchona, &c., and was recommended the most generous diet possible, with wine and porter. This failing, he was advised, as the *only hope* of cure, to take a long sea-voyage to a warmer climate. He had made up his mind to follow this advice as a *dernier resort*, when one of his legs became suddenly so seriously ulcerated and his whole system so debilitated, that he determined to place himself under my care in consequence of hearing of the extraordinary agency of oxygen in cases of ulcerated legs and general debility. Such was his history.

June 29th, 1856.—This unfortunate gentleman consulted me. I found him extremely weak and anæmic, his powerful and muscular frame completely relaxed and attenuated; the skin throughout the body was quite blanched, and so transparent as to show deeply beneath the surface *general* dirty-looking congestion, with occasional spots of complete purpura. Some caries of one superior maxillary bone was observed, extending from the alveolar processes of the molar teeth. He suffered much from cerebral irritation, the eyes being suffused, intolerant of light and almost useless, with chronic iritis, and some effusion of lymph of low organization. Pulse from 100 to 112, very small, almost imperceptible; tongue white and relaxed; and although the weather was tolerably warm, his vital powers were so low as to render it almost impossible to generate sufficient animal heat to keep him alive, the extremities being cold and clammy. In fact, universal prostration and torpidity of function prevailed; and I ought to add, that he had a suspicious, short, hacking cough (which had existed some months), with profuse nocturnal perspirations, but no well-marked physical signs of tubercular deposit. Upon examination

of his legs, a very large ulcer was seen on one calf, and a little ulcerated point, communicating with a small but deep cavity on the other. The larger one, he informed me, had commenced in a little spot about a fortnight previously, and had for some days been spreading very rapidly, causing much severe pain and constitutional irritation. It now presents the peculiar appearance of a sloughing mercurio-syphilitic ulcer, exactly circular, about two inches in depth, considerably excavated; the whole circumference for the distance of an inch and a half or two inches from the edges, is hard, red, and extremely sensitive; there is a discharge of dirty-looking sloughy matter and acrid sanious fluid. In spite of the vigorous and judicious measures advised by an eminent London surgeon, who had been consulted a few days previously, the sloughing ulceration is rapidly extending; and in the excessive prostrated condition of the sufferer the case appears by no means hopeful.

Here an opportunity offered of severely testing the power of oxygen; and knowing what this therapeutic agent could effect in analogous non-syphilitic ulcers, and in most cases of extreme debility and languid circulation, I at once determined energetically to bring it into action. My patient was ordered to preserve the horizontal position, and to foment, poultice, etc. The same afternoon I administered a large dose of the gas, which had the effect of making him feel more comfortable. The following morning, the ulcer still alarmingly progressing, I carefully superintended the administration of the largest quantity that could be borne, and ordered a moderate inhalation in the evening. From that time it spread no further, and by daily watching my patient during the succeeding fortnight I had the satisfaction to witness the separation of the dead portions, the perfect cleansing of the whole surface (the muscle being left exposed for some distance, and its movements being seen at the bottom of the cavity), and the gradual filling up of the depth with granulations; while at the same time the appetite returned, and the capillary circulation, with the entire nervous system, began to regain tone. Small doses of iodide of potassium were now ordered three times a day, and nutritious but moderate diet with porter; cod-liver oil was rubbed into the chest twice a day, and tepid daily sponging of the whole body was enjoined. In five weeks he was able to walk about, and in seven weeks entire healing of the large and deep excavation, resulting from the ulceration, had taken place, permitting him with his increase in strength to walk without difficulty many miles. He now left town, taking with him a supply of condensed oxygen, with a strict direction to continue his moderate inhalations, the iodide of potassium and the cod-liver oil externally, and to communicate with me by letter once a week. Three weeks afterwards, having walked rather too much, and having otherwise irritated and injured the place on the *other* leg, where the small

point of ulceration had apparently healed under the influence of the oxygen *without sloughing*, he thought it advisable to return to London. I found an ulcer of moderate size, much inflamed from irritation, rubbing of his trousers against it, and neglect; moreover, he had caught a severe cold, and his cough (which had never left him), with profuse perspirations at night, caused much disturbance. He was feeble and *extremely* sensitive to cold, although the weather was warm. I gave him stringent directions as to quiet for his leg, largely increased his quantity of oxygen at each inhalation night and morning, continued his other constitutional treatment as above mentioned for the specific diseases, and watched him closely by means of two long daily visits. He again progressed most satisfactorily, and was soon enjoying his favorite pedestrian exercise.

Steadily continuing his treatment, he, towards the middle of September, had entirely lost his consumptive cough and nocturnal perspirations, had fully regained his nervous tone, and had recovered his flesh; he suffered no longer from cold and languid circulation; the dirty congested appearance beneath the cuticle had quite disappeared; the jaw (from which there had been some exfoliation) seemed quite sound, and the general cerebral irritation with iritis had for some weeks ceased to evidence itself, the effused lymph likewise having undergone complete absorption, and the membranes and chambers of the eye being quite clear and free in their movements.

About the end of October, this gentleman, an ardent disciple of Nimrod—wrote for permission to follow the hounds again. With a caution, I acceded to his request; and I have since learned that he rode very hard during the hunting season without any return whatever of his former protracted disease. A few days ago, I may add, I heard some further account of him, and he is now stouter and stronger, and altogether in more robust health, than (he thinks) he ever recollects.

It is especially worthy of remark, with this interesting case in retrospect, that there exists probably no remedy at all comparable with oxygen as (in common parlance) a "purifier of the blood," when judiciously administered. My own experience particularly points to its well-marked and energetic action upon the general capillary circulation and upon the skin; in most cases it powerfully promotes the healthy secretions of the latter, and enables it to throw off an immense amount of morbid and poisonous matters; and, unlike all other medicines, while performing this duty, it produces no weakness or other untoward effects, but, on the contrary, simultaneously acts as a general tonic to the entire constitution. It will be observed that I ordered, as an *essential* adjunct to treatment, tepid sponging of the whole body daily, the poisonous *débris* cast off with the aid of the gas, and accumulating on the skin, obviously necessitating either such sponging or the use of

the tepid bath. It also merits a passing notice how quickly the heroic doses of the gas, temporarily and carefully given, demonstrated the power of this therapeutic in cutting short and arresting the progress of rapidly-spreading ulceration.

I will give a second case very briefly, from memory, so as not to lengthen my present paper too much.

A. B—, a policeman, aged thirty-six, had been nearly three months under skilful medical treatment on account of inveterate boils and carbuncles, which, appearing in continuously successive crops, resisted every remedy. At length he was advised that medicine could do no more for him, and that he must get immediately into the country, for the purpose of trying what that change could effect. He was at this time covered with from twenty to thirty specimens of this very painful eruptive disease, and his health was necessarily much undermined from acute suffering and constitutional irritation. Being accidentally met with, he was offered gratuitous treatment under oxygen. Having a family to provide for, he could ill afford to leave them, and therefore thankfully accepted the proffer. He at once commenced a daily inhalation, and so rapid was his progress that in from ten days to a fortnight all the eruptions had entirely disappeared, and the unhealthy constitutional condition was so completely overcome as to render the cure permanent.—[*Ibid.*

Dr. Marshall Hall: The History of his Case, and the Post-mortem Appearances.

If the pages devoted to the science of Medicine in this country may with advantage be illustrated with interesting and important cases, on no occasion can a space be more usefully or more gracefully afforded than in the present instance. We have to record the particulars of the case of one of the most distinguished, most talented, and most industrious of her professors; for such a man in every sense, was the late Dr. Marshall Hall. To render the story of his case complete, it is necessary to go back some years previous to the appearance of the last severe and fatal symptoms; for some peculiar features connected with the earlier symptoms rendered the case somewhat different to those generally met with in practice, and made the sufferer himself, always patient, thoughtful and suggestive, consider that it presented features worthy of notice; and also made him anxious that its investigation should be completed by a post-mortem examination.

His own account of an early inconvenience or difficulty in swallowing, best explains the symptoms as they occurred:—"Some fifteen years ago," he wrote to a friend, "I undertook to deliver two long and distinct courses of Lectures on the Practice of Physic, during the same winter." His custom was to lecture from six

to seven, and then from eight to nine, in the same evening. He felt inconvenience during this winter from hoarseness and cough for the first time, and began to perceive that minute portions of food were apt to remain in his pharynx, and that after meals he occasionally raised some small portions. This difficulty of swallowing very gradually appears to have increased; and he was induced, some years ago, to consult Sir Benjamin Brodie and Dr. Chambers on account of the increasing symptoms of obstruction; but on Sir Benjamin Brodie passing a bougie, no evidence of obstruction by contraction of the cesophageal tube could be detected. Mr. Guthrie, whom Dr. Marshall Hall also consulted, told him that he was only suffering from what was called "clergyman's throat." But the dysphagia continued, and during deglutition much care was requisite in the act of swallowing, and food could not be hastily taken, and while in the act of swallowing much regurgitation could be heard by those sitting near him.

He considered this condition to be due to a defective reflex action which prevented the muscles of the pharynx from acting with sufficient power to propel all the food lodged in it; but the probability is, that there was some such dilatation of the pharynx at this early period as is sometimes met with, and which in a measure acts upon the aperture of the cesophagus mechanically, and thus interferes with the ready passage of food. Such were the symptoms which continued slowly increasing, but which never prevented a sufficient amount of food to be taken, both solid and fluid, to keep up a proper nutrition, until about the end of 1855, when Dr. Marshall Hall first perceived that in the expectoration he usually had in the morning there was occasionally a slight tinge of blood, and this especially after much speaking or exercise. The dysphagia also commenced from this time to be troublesome and serious.

Previous to this date, Dr. Marshall Hall had retired from active practice in London, as he found his health was failing to a certain extent, and some spots of purpura appearing on his legs. He wisely determined at once to give up the anxieties of professional occupation, though it entailed the sacrifice of a large professional income. He made a tour of the United States in 1854-55, and spent the following winter and spring in Italy. He returned to England much better in health, but not improved so far as the throat affection was concerned. After a short stay in town, he went to Hastings, and came to town again in October following. It was now that the symptoms of permanent stricture of the cesophagus were fully established. He had some time ceased to partake of solid food; milk, cream, and coffee, were the fluids he chiefly preferred. With the evident obstruction there was constant copious expectoration of purulent mucus, somewhat offensive in character, and occasionally during each day tinged with blood. He was seen in consultation by Dr. Williams, Mr. Caesar

Hawkins, Mr. J. R. Martin, and Mr. Pollock, all of whom were agreed as to the serious nature of the complaint. He was quite prepared for the expression of their most unfavorable opinion, and was even cheerful whilst under examination. In speaking to one of his medical friends, who was constantly with him whilst in town, he said, "I don't ask you what your positive opinion is as to my prospect of life, for no one can be certain of the result of a hidden malady; but I look upon my disease as a fatal one, and have long done so. I have no hope of recovery. I don't wish you to mention this to Mrs. Hall. I have no fear of death, and cannot be alarmed by the truth. My only wish to live is for the sake of others; but I am resigned to the alternative, if it be ordered that I should not live much longer." The calm, resigned, and almost cheerful manner in which he spoke, at once showed the preparation and the courage of a man who knew his end was not far distant, though still, as ever, unselfish, considerate, and affectionate for those dear and near to him.

Whilst in London, he had a wish to have the nitrate of silver applied in solution to the supposed ulcerated part of the pharynx; but when advised not to employ it, he readily acquiesced in the opinion of those he had consulted. He had applied the solution to the throat when in the country, but had been apparently much distressed by it; and though he had expressed a wish for its application a second time, he evidently had no desire to persist in its use, from the distress it had occasioned.

After a short stay in London he removed to Brighton. He now placed himself under the care of Mr. Wildbore, whose constant care and attention to him he always spoke of with much gratitude, and to whose note-book we are indebted for the remaining particulars of his case.

After being settled in Brighton, he complained of, and suffered much from cold. It always distressed his throat, and rendered more difficult the efforts of swallowing. His room was obliged to be kept at a temperature of from 70° to 75°; his diet was entirely milk, cream, and coffee. In January of this year he wrote to Mr. Pollock:—"I have been for two months at Brighton, and the complaint has made no progress, but in cold, foggy weather my dysphagia is always worse. I am intensely susceptible to cold. I have been many days lately without blood in the expectoration; and last night it came on, after going to bed, without any assignable cause. Everything I take is apt to leave particles in my pharynx, even a light-boiled egg. Hence the cause of the irritation and consequent ulceration there. If so slight a thing will irritate and produce exudation of blood, there is surely ulceration there, and this, in fact, has all along been my opinion." We shall hereafter see how true was the opinion he had formed of his own case.

There was at all times, to a greater or less degree, "a stinging,

burning pain" behind the larynx; sometimes for a day or two it was absent. During February the symptoms were variable, the dysphagia increasing as the temperature became colder. Once or twice there was slight regurgitation of fluid by nose and mouth. Some considerable benefit was derived from sipping a solution of chlorate of potash in water several times a day, with marked temporary benefit to the swallowing, but the effect was not permanent.

In March he had a severe attack of the gout, when much uric acid passed in the urine. This was relieved by small doses of potash sipped in water, and also used in an enema. The dysphagia slowly but gradually increasing, four pints of milk were now only taken in the course of the day, and it occupied nearly half an hour to get down half a pint.

On the 10th of March he walked out, after four months confinement to the house. The sun was hot, but the wind very cold, and the following day he was confined to bed, suffering from bronchitis, and all his ordinary symptoms aggravated. During several hours no fluid could be swallowed, and on attempting to pass a tube for himself, an obstruction was met with opposite, as he said, the first or second portion of the sternum. This attack left him very weak. He complained much of thirst, and said his feelings of hunger were dreadful. Still he was most patient, and even cheerful in conversation, under all his sufferings.

In a few days the attack of bronchitis passed off, and he now derived much comfort from supping iced milk and sucking small pieces of ice; but the exhaustion and emaciation were becoming considerable, and the quantity of fluid taken by the mouth was reduced to about two pints in the twenty-four hours. Mr. Wildbore therefore recommended him to allow the administration of nutritious enemata, of which the following was the mixture: five ounces of strong beef-tea, one ounce of port wine, and three grains of quinine. This was given three times daily, and the whole quantity always retained. The quinine was added on account of his suffering from intermittent fever, which came on every night. The enemata were evidently absorbed, for the bowels only acted once in three or four days under the influence of a warm water enema, with some salt dissolved in it, and this would be followed by a healthy motion.

On the 10th of April, for twenty-four hours, there was complete interruption to the passage of fluid through the throat; but on the following day he was again able to swallow milk and some wine and water. Towards the end of the month the difficulty of swallowing was so great, that if more than three teaspoonfuls were taken directly one after the other, the fourth would bring on cough, and the greater portion would be returned by nose and mouth, mixed with mucus, as if the fourth spoonful filled up the tube to the aperture of the glottis, and thus excited cough.

During the month of May he suffered much from hunger; but

taking the enemata four and five times a day appeared to nourish him to the extent that he was able to bear the erect posture, which he could not a fortnight previously owing to vertigo. The aguish attacks were also severe, and he took constantly about twenty grains of quinine in the enemata, which had the effect of relieving him, but produced deafness and singing in the ears.

In June the voice began to be affected; the expectoration, which had become white and frothy, was again purulent and offensive. The efforts to swallow were attended with much exhaustion, and the struggles to get fluid down were very great. The loss of voice at the end of June was unchanged; the "stinging, burning pain" greater, and debility increasing; the expectoration very copious. Notwithstanding his condition, about the middle of the month he ate a fair dinner of lamb and asparagus for three or four days consecutively, swallowing it all. Then came a cold wind and increased dysphagia.

In July, early in the month, he applied himself a four-grain solution of nitrate of silver to the pharynx five times. This increased the "stinging, burning pain" greatly for two hours after each application, but no beneficial result of any kind was obtained. Chills and profuse sweats attacked him every evening, and the aphonia continued. During July he gradually became weaker, and the quantity of fluid taken by the mouth was about a pint and a half of milk daily. It may be mentioned that nearly all the time he was at Brighton, up to the last few days of his life, he looked fresh and healthy—a circumstance somewhat remarkable.

By his own desire, he went out in the early part of August in an open carriage, but all his symptoms were becoming worse; the breathing short and asthmatic, and the air-passages clogged with mucus. The rectum also became uncertain in its power of retention, and the enemata were sometimes returned. On August 11th, at twenty minutes past eight, he died, maintaining his consciousness to within a few minutes of his death.

His friend Mr. Wildbore wrote of him, but a few days before his death, "It is wonderful to me how he bears up against his disease. He is ever thoughtful of and kind and considerate to all around him, and most grateful for the least kindness or attention shown him; always interested in professional questions, and ever active in mind upon those subjects which have chiefly occupied his attention. He is most patient, and perfectly resigned." All who knew and watched him during the progress of his disease, and witnessed the high courage and true resignation with which he submitted to his sufferings and to the prospect of death, will feel that Mr. Wildbore's estimation and record of him was only what was just to the character of the greatest of English physiologists.

The post-mortem examination of the body was made by Dr. Ransom, of Nottingham, thirty-eight hours after death, in the pre-

sence of Dr. Hutchinson, Dr. Robertson, Dr. T. Wright, Mr. Higginbottom, Mr. Eddison, Mr. Wildbore, and Mr. M. H. Higginbottom; and for the record of which we are indebted to Mr. Ransom.

The body was emaciated. No external marks of decomposition.

Thorax.—The lungs did not collapse on the cavities being opened. The right one was universally adherent by old adhesions; the substance of the lungs healthy; no pleuritic effusion.

The pericardium contained nearly two ounces of dirty red fluid. The heart was flabby (perhaps from cadaveric changes); it contained frothy blood in the right ventricle and auricle. The valves were competent. There were some slight atheromatous deposits on the inner surface of the aorta, which was stained a deep red.

The bronchial glands were larger than usual, soft and black.

On making examination of the parts higher up in the throat, it became evident that some undue thickening and adhesions existed behind the larynx. The latter was therefore removed, with the pharynx, œsophagus, and trachea. In doing this, the intimacy of the adhesions necessitated that the knife should be carried close to the bodies of the corresponding vertebræ; with every care, however, button-holes were made in two or three places. On removal it was seen that the walls of the pharynx were extremely thin, and that its cavity was dilated. Through the openings made by the knife there escaped a dirty-brown flaky fluid, of a creamy consistence. The adhesions were to the bodies of the sixth and seventh cervical, and first and second dorsal vertebræ.

The parts removed, when examined, showed a stricture of the œsophagus, about the level of the eighth ring of the trachea, and a dilatation, with ulceration and vasculature of the œsophagus and pharynx above the stricture, to the extent of nearly three inches. The stricture was attended with but moderate thickening of the tube, and the aperture was not very small, but the membrane was folded in, so as to present a conical eminence upwards, the apex of which was opposite the narrowest part of the stricture, which here was rather larger than a goose-quill. In this way the passage was almost valved, and food would have had the tendency to pass down by the sides of the eminence into the pouches and sacculi of the ulcerated portion. Indeed, the finger passed down from above, previous to opening the œsophagus, could not enter the passage, though a similar difficulty did not exist if the finger was passed from below the stricture. The upper border of the ulceration was on each side about level with the bases of the arytenoid cartilages, but did not extend so high in the middle. The dilatation was throughout irregularly ulcerated, soft, pulpy, ragged, of a dirty grey or slate colour, and with a few loosely-adhering flakes on its surface. Its base was not much thickened, though here and there it was somewhat so, and felt firmer in such parts. The walls of the pharynx and œsophagus were perforated in sev-

eral places, leading to pouches or sinuses amongst the muscles of the neck, having very thin delicate walls of false membrane. Two of these pouches were very large, and ran upwards on the outer surface of the thyroid cartilage, one on each side as high as its upper border, the right pouch being the largest. A narrow slip of mucous membrane remained at the back of the trachea, but this at the lower extremity was quite undermined.

At the lower part of the dilatation the ulceration had nearly perforated the trachea through the posterior membranous wall, and had set free the right extremities of the fourth, fifth, and sixth cartilages. The pharyngeal mucous membrane above the ulceration appeared nearly natural, except for two or three little rounded elevations, as if there was a deposit in the mucous membrane, each less than half a pea in size. There was a small pendulous polypus attached to the thyro-epiglottidean fold. The œsophagus below the stricture was healthy.

In the mucous membrane of the trachea directly corresponding to the deep ulceration which threatened to perforate it, was a small deposit or growth—semi-transparent, solid, and slightly elevated. There was a similar one higher up, inside the cricoid cartilage, but it was more opaque and white.

The patch on the tracheal mucous membrane was cut across, and from a section of it were obtained cells which possessed all the characters of cancer-cells. They were delicate, large, irregularly angular, with elongated processes; some were, however, rounded, had peculiar large nuclei and nucleoli; often several of these in one cell, and sometimes a cell-wall around one or more of the contained nuclei. Some few of the nuclei presented a delicate, regular radial striation, which Dr. Ransom observes he had not before seen. These cells were contained amongst the meshes of the elastic tissue. From the whiter patch on the inside of the cricoid cartilage, similar cells were obtained, but they were fattily degenerated, and therefore were less characteristic. From the base of the ulcerated surface, Dr. Ransom found in parts examined no satisfactory evidence of the nature of the pathological process which had preceded; but amongst a mass of granular and fattily degenerated elements, several bodies were always seen resembling retro-grade cancer-cells.

The fluids from the surface of the ulcer consisted mainly of molecular detritus and fat, in drops and granules, with a great number of epithelium scales, mostly of the scaly variety; but a few were cylindrical and ciliated, probably separated from the upper parts of the pharynx. In the little elevations on the mucous membrane of the pharynx, nothing was found but globular corpuscles and cells filled with fat granules, of various sizes, and one beautiful hexagonal crystal-like cystin was observed.

A portion of the pharynx and œsophagus, examined by Mr. Cæsar Hawkins, Mr. Pollock, and Mr. Holmes, curator of St. George's Hospital Museum, gave the following results:

1. A portion of the disease was surrounding the great vessels in the neck, and apparently making pressure on the upper part of the pharynx. The interior appeared of a cellular character. Sections showed fibrous tissue, with numerous nuclear bodies, and much fat.

2. A small tubercle, beneath one of the rings of the trachea, contained an immense number of nucleated cells, resembling those of healthy epithelium, but of more curious form and size, also a good deal of fat.

3. A mass containing dark masses (of black pigment), otherwise exactly resembling the portion first mentioned.—[*Ibid.*

Death of Charlotte Brontë. By WALTER CHANNING.

The death of Charlotte Brontë is the saddest fact in a life whose key-note was sorrow, and whose melancholy music filled the very atmosphere in which she lived, and moved, and had her being. She may almost be said to have been baptized in the dark waters of death. Her mother died when she was about five years of age, and, in quick succession, four sisters and her only brother.

It was not a common family, that of Charlotte Brontë. Two of her sisters died young, but lived long enough to indicate that they would have left their mark on their times. The two elder sisters gave the same evidences of their power in written works. Her brother had large intellectual endowment and culture, but worse than wasted all that might have greatly distinguished him. We do not design in this notice of one whose life has been so admirably written by Mrs. Gaskell, and which all readers have read, to review this work. And yet it may not be out of place to say that it is a record of a remarkable person, who in the midst and pressure of severe trial, never failed in duty to herself, and to all to whose well-being she could in any way contribute. She was small, delicate in person—apparently incapable of effort. Yet she meets, or makes occasion for intellectual, moral and physical action, which in its detail astonishes us by its rarity, and still more by its success. She writes with startling strength—brings before you men and women, her own creations, and reveals what is in them, both in their word or work, in language and act which leaves little ground for question. She goes to a foreign country, of different language from her own—goes alone, by the guidance of the same instinct which always accompanies a true object, and accomplishes all she attempts. She writes, and while her manuscripts are gathering dust on the publisher's shelves, she writes on, nothing daunted, and at length comes forth as an author, and declares anonymously, her gigantic power. "Who wrote *Jane Eyre*?" is the question. "Not a man," says one, "for a man would not"—"Not a woman," says another, "for a woman could not."

Pardon us, for we have for a moment deviated from our purpose—to speak of the death of Charlotte Brontë. We could not but say a word of a life so sad as was hers, and for the reason that in an event which was to her an unmixed felicity, she found death. Sadly, in deep sadness, do we ask, was it not a fitting coronation of such a genius, and such a life?

Charlotte Brontë married late in life. Her father opposed her marriage, and the daughter could not marry the man she so deeply loved, as her marriage must separate her from her father, now more than eighty years of age, and with no living creature of his house, but her left. At last, her father's consent is given and she is married. This was an event in Haworth. Every body came to the wedding. Charlotte had been the friend of all the poor. She would traverse, in snow and rain, the wild moors of her home, to carry something for the sick child or parent, or to do something for them. Every body knew her, and every body loved her. Says Mrs. Gaskell, "many old and humble friends were there, seeing her look like a snow-drop." Her bridal dress, after a few months, became her shroud.

She became pregnant, and soon after experienced the ordinary symptoms of that state, but which rapidly became morbidly severe. Nausea, vomiting and faintness; and fainting, at first frequent, became, at length, constant. The sight of food was sufficient to produce them all in most distressing forms. Said one, "a wren would have starved on what she ate during those last six weeks." A physician was called. "He came, and assigned a natural cause for her miserable indisposition; a little patience and all would be right."

From the record, nothing more seems to have been said or done in this case. We copy the following from Mrs. Gaskell, because of its professional interest, and as showing something of the sufferer's state in the last moments of her life.

"Long days and longer nights went by; still the same relentless nausea and faintness, and still borne on in patient trust. About the third week in March (it was early in the new year, 1855, that the symptoms first appeared), there was a change; a low, wandering delirium came on; and in it, she begged constantly for food, and even for stimulants. She swallowed eagerly now; but it was too late. Wakening for instant from this stupor of intelligence, she saw her husband's woe-worn face, and caught the sound of some murmured words of prayer that God would spare her. 'Oh!' she whispered forth, 'I am not going to die, am I? He will not separate us, we have been so happy.'"

She died Saturday morning, March 31st.

It is of the professional relations of our subject—the treatment of the signs of pregnancy when morbidly aggravated, that we would now speak. Was the cause the motive cause of those symptoms which produced death in Charlotte Brontë, removed? The

question is of great interest. Nearly half a century ago, it was our privilege to attend the midwifery lectures of Dr. John Haighton, in London; and a better lecturer than Haighton, is not in our memory. He discussed this question of removing the *cause* of these symptoms, and showed conclusively that in cases in which other means had failed, and the worst consequences were to be looked for, it was the duty of the physicians to remove the *cause*, viz., to remove the *fœtus from the womb*. Haighton related his experience, and dwelt on the opposition he had met with in consultations, to such measures as he knew could alone save life. More recently we have spoken with eminent men abroad, on this subject, and have met with objections to the practice; or, when it has been allowed to be proper, it has been after so much evil has been done that there has hardly been any reason to look for success from it.

We have felt it our duty to resort to the measure under consideration, and in every case recovery has been rapid and complete. We have known death to happen when the measure has been rejected by patient or friends, and where all other means have been faithfully used. In one case it was clear that death must occur, if things remained as they were, but in which the mother of the patient would not consent to the measure; unless the physicians who advised it would in the first place guarantee its success. The attending physician would not do this; and soon after our consultation we heard of the patient's death.

In another instance, the lady lived in a distant State. She was a clergyman's wife, and of the Church of England. She was reduced by nausea and vomiting to excessive weakness, and absolutely could keep nothing on her stomach. It was between the second and fourth months of pregnancy. The fœtus was removed, and in twenty-four hours after, we found her heartily eating solid food, and she was soon well. The operation was performed on the same patient a second time under the same circumstances, and with the same result. Let it be remembered that this practice was not attempted until full trial had been made of the most approved methods of treatment, and after the best evidence that the disease was rapidly increasing. In another lady it was not until convulsive movements had occurred in the universal exhaustion, that the measure was adopted. This patient recovered, and this was a second trial of it in the same patient.

We dwell on these cases, because a grave moral question is involved in our subject; and to say that it is only in those cases in which life is clearly in jeopardy, that any physician who deserves the name, would for a moment entertain the question we are considering. It is then as a *remedy*, and only to be used, under what we believe are really desperate circumstances.

Whether the cause was removed in Charlotte Brontë's case, or whether she died of pregnancy, we know not. We know not

what was the limit of that "little patience, when all would go right." But as the disease continued unrelieved till death, may it not be asked if the *cause* of that disease did not remain undisturbed till it became the cause of death? The question is put, because in no like case which has come under our care, however unpromising, has death occurred after the removal of the contents of the womb.

The Rectory at Haworth is now desolate. Its venerable head, in his extreme age, stands erect and alone, literally in the midst of the graves of all his house; and before him, in his church, is the simple tablet on which is recorded the names, the ages, and the death, of his wife and all of his children.—[*Boston Med. and Surg. Journal.*

What are Internal Hemorrhoids?

Preparatory to entering upon any question as to their treatment we must a little clear the way by a few words as to the real nature of internal hemorrhoids. That "internal piles," in their ordinary form, are dilated or varicose veins of the anus, may now safely be pronounced a relic of by-gone and very mistaken pathology. If cut across they bleed most profusely; but the hemorrhages is arterial, not venous; and if tied, there is little or no risk of phlebitis. On dissection they show scattered, small, venous cysts, but these are minute in proportion to the mass; and should a large coagulum be found, it has more the appearance of being the result of extravasation than the contents of a varix. They are not at all more liable to occur in those who suffer from varices in the legs, etc., or varicocele, than in others. The *dilatatio venarum* theory has, indeed, been specifically renounced by most of the recent teachers and writers on the subject. Mr. Salmon is very positive in his opinion on this point, and he is supported to the full by Mr. Ashton and Mr. Syme. And here the distinction between external and internal piles must be borne in mind; the former, a rare and comparatively unimportant form, are admitted by all to be venous. External piles have, when the skin is thin, the uniform bluish tint of a vein, which can not well be mistaken, while the purple color of the internal one rather resembles that of the intense congestion of almost strangulated mucous membrane. External piles may be snipped off, and there is no danger of bleeding after the vein has once emptied itself; internal ones, if cut away, bleed continuously and profusely, and their hemorrhage, as just stated, is arterial, not venous.

We come, then, to the question—What are internal hemorrhoids? and to this the answer must be, that they consist of prolapsed folds of the mucous membrane lining the sphincter, extremely vascular and hypertrophied and thickened by long constriction. In chil-

dren, the parts about the rectum, the sphincter, etc., are lax, and the mucous membrane is very loosely connected to the muscular one; hence their liability to large prolapse, which in them always comprises the whole circumference of the bowel. In adults, however, the sphincter is more firm, and the mucous and muscular coats much more closely connected; hence the great rarity of circular prolapse. From the necessity that the mucous membrane lining the sphincter itself should be capable of wide dilation during defecation, an arrangement has resulted, however, by which during the closed state of that muscle, it is thrown into longitudinal folds, which are smoothed out when it opens. Between these folds, which, first described by Morgagni, are known as Morgagni's columns, the mucous and muscular coats are more closely united to each other, whilst beneath them the intervening cellular tissue is, of course, loose. These columns vary in number from three to six. By reference to this arrangement, the reason why extruded piles almost always present the appearance of being divided into lobes is easy to be assigned. Mr. Salmon defines piles as prolapsed Morgagnian columns, hypertrophied and rendered vascular by constriction, and states that their divisions into segments corresponds in number with the number of the columns in the individual. Thus, then, we have it clearly explained upon anatomical grounds why children almost never have piles, and why adults so very rarely have circular prolapse, and also why adults who have circular prolapse never have "piles," as a complication; the latter fact being one, which, upon the old view of their being distinct conditions, it would be very difficult to account for. We have already adverted to the importance, in respect to treatment, of this view of their nature, and how well it coincides with the results of practice. No one would fear ill consequences from tying up a mass of congested and thickened mucous membrane, while every surgeon would shrink from the risk attendant on putting ligatures on bunches of inflamed veins.—[*Med. Times and Gaz.*]

Epidermic Administration of the Sulphate of Quinine. By DANIEL F. WRIGHT, M. D.

I purposely substitute the term epidermic in this communication, for the more common expression endermic, to mark a difference in my mode of application in the case I am about to describe, from that usually adopted.

My patient was a little girl, about four years old, daughter of Mr. H. Fox, of this city. A mild attack of scarlatina had been succeeded by an obstinate consecutive fever, of a remittent type. The attempt was made to treat this with moderate doses of the sulphate of quinine, the administration of which was found utterly impossible, from the resistance of the child; indeed, the irritation

resulting from the attempt was so excessive as finally to compel me to acquiesce in the mother's opinion that it aggravated the fever. Still the periodic symptoms continued, and I was persuaded that nothing but quinine would relieve them; the question was, how was it to be administered? The endermic method was, I considered, contra indicated by the condition of the skin, which had been desquamating freely, as is usual after scarlatina. Finally, as the skin, from this recent desquamation, was in a state peculiarly favorable for absorption, I determined to try whether this could not be effected without the removal of the cuticle; accordingly I directed a sort of half-jacket to be made of coarse domestics, capable of covering the thorax and upper part of the abdomen, about two-thirds of the way round the body. This was saturated in a strong solution of sulphate of quinine, made according to the following formula:

R. Sulph. Quin.	3i.
Acid Sulph. Arom.	f 3ij.
Aquæ	3ij. 3vj.
M. Sol.	ft.	

And the mother was directed to saturate it again as soon as dry, without regarding the quantity used. While applied to the body, the whole was covered with oiled silk, to prevent absorption by the clothing.

The remissions had been occurring during the night and morning, commencing about midnight, and being most complete at about four or five in the morning; they then lasted till about eight A. M., and were succeeded by fever, which lasted till midnight.

To be sure of being soon enough, the "*quinine jacket*," as we called it, was put on at nine o'clock P. M., and directed to be kept on, saturated with the quinine solution, till I saw the patient in the morning. I purposely delayed my visit till ten A. M., (two hours after the fever usually arose,) and found my patient entirely free from fever. Thus encouraged, I directed the treatment to be continued till noon, and afterward commenced at nine P. M., and continued as before. The child never had a return of fever, and rapidly convalesced, without any unfavorable symptom.

I have presented this case primarily as affording a useful hint for physicians who may be similarly situated; but it was attended by a phenomenon highly interesting in a physiological point of view. Not more than half an hour after the *jacket* was put on, the child complained of a bitter taste in her mouth, and insisted, with great indignation, that quinine had been given her while she was asleep. This taste after a while went off, but was instantly renewed on her eating any thing; *even the idea of eating*, when excited by offering her food, brought back her taste, so that she experienced it before putting the food into her mouth.

Does it not seem that the blood of this child was saturated with the quinine to a degree beyond what can be effected by its inter-

nal administration? I know of no other mode of reasoning by which we can account for the taste, than that the blood circulating in the gustatory papillæ was sufficiently saturated with the drug to effect the nerve filaments contained in them in the same way as if it had been brought in contact with them *ab externo*.

The recurrence of the taste after it had subsided, upon the presentation of food, is still more interesting. It would seem as if a true *ideo-motor* influence was excited upon the minute muscular structure at the base of the gustatory papillæ, of such a nature as to endow them with a function similar to that of the erectile organs, namely, of receiving a largely increased amount of blood when in a state of excited activity, so that when the quinization of the blood has been too much diminished by excretion to give the sensation of taste, the papillæ being unexcited, yet when the quantity circulating in them is increased by this exciting emotion, a sufficient quantity of quinine is again brought in contact with the gustatory nerve filaments to renew the sensation.

I have doubts whether this mode of quinization could be so successfully applied in older persons, whose skin is both less delicate and less vascular; and even in children it might not be so rapid where the skin was not as well prepared by desquamation.

[*Memphis Medical Recorder.*

Lactic Acid a Remedy for Dyspepsia.

A remedy which has for a long time been used by Dr. Nelson, of Birmingham, and subsequently by many French physicians, under the name of Pepsine, for the cure of dyspepsia, and other functional derangements of the stomach, has within a short time been prescribed freely by some physicians in London. It has been very favorably noticed by Drs. Ballard and Sieveking. Dr. O'Connor has also tested its value in those cases in which it has been recommended, but not with the success attributed to its use. He was led subsequently to have recourse to lactic acid, a remedy which he believed likely to be more beneficial in those affections of the stomach in which the so-called pepsine has been administered. Before using the acid internally, Dr. O'Connor, we understand, in order to test its digestive powers as compared with pepsine, placed an equal weight of animal fibre, in equal proportions of pepsine and lactic acid, in separate vessels, in an equal temperature, when he found that the fibre in the lactic acid was reduced to a pulpy state in a very much smaller space of time than that which was put into the pepsine. After this experiment, which he thought sufficiently conclusive of the superiority of the lactic acid as a promoter of digestion, he had recourse to its use as a remedy in those affections of the stomach before alluded to. The great number of patients with affections of the stomach pre-

senting themselves among the out-patients of the Royal Free Hospital, afforded an extensive field to Dr. O'Connor for testing the efficacy of lactic acid in dyspeptic conditions. After a trial in over fifty cases, he considers that the good results following its use fully justify him in recommending it as a valuable agent. It is very necessary to be sure that the lactic acid prescribed should be of chemical purity, and of uniform strength. The dose varies from half a drachm to two drachms or more, in infusion of colomba, or a little cinnamon water. It should be taken during a meal. The lactic acid found in the shops is not generally pure; that which Dr. O'Connor has found to be most efficient, from its greater purity, is prepared by Mr. Bastick, of Brook-street, Grosvenor Square. [*Med. Times and Gazette.*]

Prevention of Bleeding after Operations upon the Rectum. By Mr. SALMON, Surgeon to St. Mark's Hospital for Fistula, &c.

In the operation for fistula and fissure, Mr. Salmon is in the habit of making very free and deep incisions, and his rule in the former disease, of cutting the base of the sinus as well as the sphincter, necessarily involves an extent of incision at least three times as great as that usually employed. Hence no unfrequent hemorrhage would result if certain precautions were not adopted. Of these precautions the first is the use of cotton-wool instead of lint, as a dressing. Immediately after the incisions are completed, a large plug of the finest jeweller's wool is introduced into the gut, and pressed gently into the whole length of the wound. There is some art in accomplishing this neatly and efficiently. A metal probe, the thickness of a quill, should be used, and the forefinger of the left hand having first been passed into the bowel, the latter is held well open, away from the wound; the tuft of wool is then pushed high up into the gut, and lastly pressed down on the line of incision. The wool must on no account be oiled, otherwise its object, as a restrainer of hemorrhage, will be defeated, since it is by its loose and absorbent texture that it forms so excellent a plug. Its softness prevents it becoming a source of irritation to the rectum, as a fold of lint of any size generally does. Each patient on being sent back to bed has a separate attendant allotted to him, whose duty it is to sit by him with a piece of sponge gently pressed against the anus, and to report any bleeding should it occur. No styptics are ever used; and the actual cautery, which is deemed the one resource, has been employed at the hospital but twice during the last two years. Continued pressure is the means which is almost invariably found efficient.—[*ibid.*]

EDITORIAL AND MISCELLANEOUS.

We cordially give place to the following *Communication* on an important Ethical point. It is from the pen of one who reasons correctly and justly, because he reasons from observation and experience :—

MEDICAL ETHICS.

Messrs. Editors :

I was forcibly impressed with the correctness of the views of the Boston Medical and Surgical Journal upon a question of Medical Ethics, reproduced in your valuable number for September last (p. 577). The article in question was in reply to a correspondent who complains that he is "largely afflicted" by the reception of letters, often very lengthy and badly written, asking for professional advice, without the enclosure of the usual consultation fee, nor even of a postage stamp.

I do not recollect that the code of Ethics adopted by the American Medical Association contains any clause touching this question—and the omission may be construed into an admission that there could be no difference of opinion with regard to a proposition so self-evident as that "the laborer is worthy of his hire." If the professional opinion or advice of a man of standing and reputation be sought, it is because it is deemed valuable; and he is justly entitled to remuneration for his trouble. The generous and fraternal usage among physicians of all countries, of rendering professional services to each other without fee, will, I trust, never be abandoned. But the case is very different in which one practitioner is requested by another to give his written opinion for the benefit of a person not of the profession and who is able to pay the consultation fee. If the parties resided near each other a *visit* of consultation would be paid for by the patient, whether made at the suggestion of the patient or of his professional attendant. Upon what grounds then can it be expected that a written consultation, whether made at the suggestion of the patient or of his physician, should be unrequited? In most instances the former service would be less troublesome than the latter—and always more satisfactory, inasmuch as it is difficult conscientiously to prescribe for a case without seeing it, however clearly its peculiarities may be set forth.

If the attending physician honestly believes that his patient ought to have the benefit of additional counsel, his duty requires that he state the fact to the patient or to his friends, who will rarely hesitate to furnish the means of remuneration. If the counsel of one at a distance be sought, the letter should enclose the usual consultation fee, which is \$10 in this section of country. As to the little matter of postage, it is hardly to be presumed that any gentleman acquainted with ordinary propriety would address

another upon business of his own, without sending a stamp for the letter of reply.

There are, of course, exceptions to all rules, in Ethics as well as in grammar. A pupil may write to his preceptor, or one friend to another, upon professional as well as upon other topics, without the enclosre of a fee. The rule above advocated is not intended to do away with the amenities of friendship, but to regulate business transactions. A physician's knowledge and reputation constitute his business capital, and he ought not to be expected to furnish it gratuitously when the party to be benefited is able to pay for it. No physician, worthy of the name, ever hesitates to do all he can for the indigent, as cheerfully as he does for the more fortunate. He is, therefore, doubly entitled to remuneration at the hands of those who have the means of contributing to his support; and practitioners who write for letters of advice ought not to allow their patients to forget this.

JUSTICE.

PRIVATE LIBRARIES.—The accumulation of a Library of Medical works is a most important object to every practitioner. It should begin with the commencement of his professional studies, and only terminate when his eye-sight has failed from diligent reading, or when he has lost all interest in scientific subjects—an event which cannot occur, if he *uses* the library he is accumulating. We have seen some queer accounts of Libraries: Professor Gibson, in his graphic sketch of the great Velpeau,* describes him as having access in early life only to his father's library, which consisted of but two books, a work on Farriery, "The Complete Drover," and a volume of Medical Receipts;—this, perhaps, is a little better than the "Library" described by the inimitable author of "Handy Andy," where old Squire O'Grady spent much of his leisure time; this "library" was comprehended in, so far as we can recollect, (we have not the *catalogue* by us,) "a pair of Spurs," "a Boot Jack," "a Fishing Tackle," "a pair of Antlers," and perhaps "a book on Stock-raising."—Velpeau made the most of his library; from his book on Farriery and his book of Receipts, his ambition was stimulated into active vitality,—he left his native village, went to Paris, became first the Scullion (this is too bad—he had "the run of the kitchen") in the family of the celebrated Dubois, then his office boy, then his pupil, finally his equal, and *his*, and almost every body *else's* superior in scientific lore, in the city of Paris—indeed, in the world. Velpeau accumulated and used a *library*. Dr. Gibson found him "in his study behind a pile of books which he was pitching with great vivacity from right to left, in search of authorities and quotations for a large work on Surgery, then in Press."

In the "*concours*" for the various offices in the gift of the Profession at

* See Gibson's *Rambles in Europe*.

Paris, it was at that time necessary for each contestant to present a treatise on some subject, kindred to the department in which he was candidate for a place; M. Velpeau, with an abundance of accurate knowledge in every department, produced his treatise;—through improper influences was at first defeated, but contested again and again, till finally he gained a position where his contests were no longer with individuals, but with the world—and in that contest he came off conqueror. We are not, however, preparing a sketch of M. Velpeau, but we are simply engaged in, what are only entitled to be called, “ruminations on the subject of private libraries,” and “the Blacksmith of Breches” came up naturally as a remarkable illustration of the wonderful results of an ardent and devoted attention to books.

Sir Thomas Carlyle,* in his own graphic style, thus portrays the relative value of books and other modes of gaining knowledge:—“Universities,” says he, “are a notable, respectable product of the modern ages. Their existence, too, is modified, to the very basis of it, by the existence of Books. Universities arose while there were yet no Books procurable; while a man, for a single Book, had to give an estate of land. That, in those circumstances, when a man had some knowledge to communicate, he should do it by gathering the learners round him, face to face, was a necessity for him. If you wanted to know what Abelard knew, you must go and listen to Abelard. Thousands, as many as thirty thousand, went to hear Abelard and that metaphysical theology of his. And now for any other teacher who had also something of his own to teach, there was a great convenience opened: so many thousands eager to learn were already assembled yonder; of all places the best place for him was that. For any third teacher it was better still; and grew ever the better, the more teachers there came. It only needed now that the King took notice of this new phenomenon; combined or agglomerated the various schools into one school; gave it edifices, privileges, encouragements, and named it *Universitas*, or School of all Sciences: the University of Paris, in its essential characters, was there;—the model of all subsequent Universities; which down even to these days, for six centuries now, have gone on to found themselves. Such, I conceive, was the origin of Universities.

“It is clear, however, that with this simple circumstance, facility of getting Books, the whole conditions of the business from top to bottom were changed. Once invent Printing, you metamorphosed all Universities, or superseded them! The Teacher needed not now to gather men personally round him, that he might *speak* to them what he knew: print it in a Book, and all learners, far and wide, for a trifle, had it each at his own fireside, much more effectually to learn it!—Doubtless there is still peculiar virtue

* “Six Lectures on Heroes and Hero-Worship and the Heroic in History.”

in Speech ; even writers of Books may still, in some circumstances, find it convenient to speak also,—witness our present meeting here ! There is, one would say, and must ever remain while man has a tongue, a distinct province for Speech as well as for Writing and Printing. In regard to all things this must remain ; to Universities among others. But the limits of the two have nowhere yet been pointed out, ascertained ; much less put in practice : the University which would completely take in that great new fact, of the existence of Printed Books, and stand on a clear footing for the Nineteenth Century as the Paris one did for the Thirteenth, has not yet come into existence. If we think of it, all that a University, or final highest School can do for us, is still but what the first School began doing,—teach us to *read*. We learn to *read*, in various languages, in various sciences ; we learn the alphabet and letters of all manner of Books. But the place where we are to get knowledge, even theoretic knowledge, is the Books themselves ! It depends on what we read, after all manner of Professors have done their best for us. The true University of these days is a Collection of Books.”

Thus speaks this original master mind of the importance of Books and Reading. At the present time and in our glorious country, no single book, nor a library of books, can “cost an estate of land,” but they come to us, are crowded upon us, at prices which it would seem, by their very cheapness, arouse our suspicions of their value. Books on all subjects, translated from all languages and the productions of the best minds of all countries, are accessible to every one who has the taste and the diligence to read them. Any one may have a library—any one may possess in his own house, what this great Thinker calls “the true University of these days,—a Collection of Books”—a *domestic* University, whose very atmosphere is improving and refreshing, whose teachings give tone and dignity to our bearing, and whose faithful cultivation establishes in our minds and hearts associations, approaching to a *tender affection*, for each one of its silent but potent members ;—for our part, we never read a book, good or bad, (none are *wholly* bad,) but that we feel ourselves ever afterwards attracted towards it, and that it has laid us under an everlasting obligation, by some new idea we have gained, or some new train of thought it has put in progress. The time has come when the *reading* world is really the *ruling* world, for reading leads to effectual writing, and “the pen is mightier than the sword.” As in Government, so in Science.

On account of the unusual number of works sent us for review the present month, we have occupied most of our Editorial space with book-notices, to the detriment of our Miscellany. We hope to make this department fuller in our next number. Notices of several important works have

been crowded out for want of space. They also will appear in our December number.

A Theoretical and Practical Treatise on Midwifery, including the Diseases of Pregnancy and Parturition, and the attentions required by the Child from Birth to the period of Weaning. By P. CAZEAUX, Member of the Imperial Academy of Medicine; Adjunct Professor in the Faculty of Medicine of Paris; &c., &c. Adopted by the Superior Council of Public Instruction, and placed, by Ministerial decision, in the rank of the Classical works designed for the use of Midwife Students, in the Maternity Hospital of Paris. Second American, translated from the fifth French edition, by WM. R. BULLOCK, M.D. With one hundred and forty Illustrations. 8vo., pp. 992. Philadelphia: Lindsay & Blakiston. 1857. (For sale by T. Richards & Son.)

The first edition of this truly valuable work was published in 1840, in Paris. It was my good fortune the same year to obtain a copy, which I found of essential service in the preparation of my lectures. I desired very much an English translation as a text-book for my class, and would gladly have undertaken the task, had my engagements allowed. The first translation into our language, in the United States at least, was made by Dr. R. P. Thomas, of Philadelphia, in 1850, from the second French; which I have since recommended as one of our best text-books on Obstetrics.

Professor Cazeaux has recently published the fifth edition, which he has carefully revised and enlarged to double the size of the first: of this fifth edition the work before us is a translation.

The adoption of this work by the Royal Council of Public Instruction in Paris is sufficient evidence of its high reputation, while its great popularity is as satisfactorily proved by the fact that it has passed through five editions in French, besides those in the English and other languages.

While we believe this treatise is the most correct and comprehensive but concise exposition of the present state of obstetric science and practice, we would not subscribe, without reserve, to all the opinions and views of the author: for to cite one instance—

Professor Cazeaux is certainly mistaken in restricting the use of opium in puerperal convulsions to anemic cases, and in rejecting anesthetics altogether from their treatment; for these are unquestionably most invaluable agents, by the proper administration of which the mortality of this truly terrific affection has been very much diminished.

It would be unwise indeed to take offence at a few small defects, where there is so much to approve and admire: there are few books of the same size in favor of which so much, and against which so little, can be said.

This work was principally designed and is admirably calculated as a text-book for students; but the practitioner will find it very useful and interesting as a book of reference.

J. A. E.

A Collection of Remarkable Cases in Surgery. By PAUL F. EVE, M. D., Professor of Surgery in the Medical Department of the University of Nashville. Philadelphia: J. B. Lippincott & Co. 1857. pp. 858, 8vo. (For sale by T. Richards & Son, Augusta.)

We have several times made mention of the expected appearance of the above work and promised in it a highly interesting and useful Book. We are happy to inform our readers that, on a careful examination of it, we are far from being disappointed. It is the *cream* and the *Romance* of all that is interesting and startling in Surgical Literature, and as such is a most engaging and attractive book;—in this light, it may be called “Half hours in Surgery,” or “Surgical Recreations,” for none of the cases reported are tedious, and all of deep interest;—but in another light, it sustains a most important relation to the Reader. From the perfect system observed by its distinguished author, and for which he is so remarkable in every thing he attempts, we find in it, what may be considered “a complete Dictionary of remarkable and rare cases of Surgery,” which every writer or recorder of surgical facts must ever hereafter turn to and consult, before he records *any* case, however remarkable it may appear to him, as unprecedented or unique.

The work is embodied in *Ten* comprehensive CHAPTERS, respectively detailing the striking points in cases, of Injury and of Diseases of the nine different regions into which the body has been divided—thus, the *Head*, the *Spinal Column*, the *Face*, the *Neck*, the *Chest*, the *Abdomen*, the *Pelvis*, the *Genito-Urinary Organs*, and the *Extremities*. “Chapter X.” is added for the record of remarkable *miscellaneous* cases, which is by far the largest division of the work.

The above arrangement we very much approve of, especially looking upon it as a work of reference; for now, should any one desire to consult the work with the view of finding some case analagous or identical with one of his own, it will only be necessary to turn to the particular chapter detailing the cases of the region which refers to his own case.

The work shows much erudition and great research and labor: Cases are there collected from the surgical records of every land and every tongue, and presented to the reader in a compact but comprehensive form—many of the author's own cases being distributed throughout the volume.

As the author has complained of “*l'embarras des richesses*,” and frankly confesses that much matter which he had prepared was excluded for want of space, we hope the apology will be sufficient for those who may feel neglected, and we further hope that a *second* volume will be the result of this “superabundant wealth.” We can truly say of this work “that it should be found in every medical library.”

A Treatise on Diseases of the Skin. By ERASMUS WILSON, F. R. S. Fourth American, from the fourth and enlarged London edition. 8vo., pp. 649. Philadelphia: Lea and Blanchard. 1857. (For sale by T. Richards & Son.)

Every practitioner should possess some treatise on Diseases of the Skin. There is, perhaps, no class of affections which so often bring mortification and disgrace upon the regular members of the Profession as the class of "Cutaneous Diseases"—there is no class in which the Diagnosis is so uncertain, the Treatment so empirical and the Prognosis so entirely beyond all prediction, as in this particular class; and yet, when we consider closely the subject, we feel confident that "this ought not so to be." Cutaneous diseases are, of course, all external, open to the examination of the diagnostician. Even the microscope can be brought to bear in the examination, and in all their various stages and phases, they are patent to the eye and to the touch, while remedies of every kind can be more conveniently applied to the *locale* of these affections than in any other class.

Notwithstanding all these great advantages, the generality of practitioners dread such cases—show great reluctance to *undertaking* their treatment—treat them, almost invariably, *unsuccessfully*, and finally neglecting them, they find their way into the hands of quacks and empirics, who, by some lucky chance, *cure* them, and heap well-merited disgrace upon the Profession. It is the general opinion—we mean, of course, the *popular* opinion—in many communities, that physicians do not understand these diseases; and the popular opinion is most shamefully correct—they do not understand them for the very reason that they do not study them with one tithe of the care they devote to every other class of affections. This state of things does not arise from the want of an advanced state of the science, in regard to skin diseases, or from any deficiency of excellent treatises upon this department; for there is no class of diseases in which the science has become more thoroughly, or has been for a longer time better established, than in this. The want of knowledge on the part of the practitioner, is from the want of reading; for certainly, the descriptions of no class of affections, can be more graphic, than those given in our systematic works of Diseases of the Skin. We were about to say, that few physicians possess a treatise on Diseases of the Skin;—this, perhaps, may not be true, for Wilson's treatise has been through *four editions* in this country, proving that *somebody* must *buy* it, even though few may have studied the work carefully.

The present edition of this work is much enlarged, and presents to the reader the whole science of the subject. It is the best treatise on Diseases of the Skin—and in our opinion, one of the best and most complete medical works in the English language.

Accompanying the Text, Messrs. Blanchard & Lea advertise an Atlas of

Plates, exquisitely colored; we have not seen these, though doubtless, they will add much to the clearness of the descriptions in the Text.

We would, unhesitatingly, advise our readers to procure the work, and the plates too, and devote about two months to acquiring some definite and reliable knowledge of this class of diseases, so that hereafter they may approach them with some degree of confidence. "The next thing to knowledge," says the great Samuel Johnson, "is to *know where* you can find it." We will assure our readers that if they wish to come *near* to knowing all about Diseases of the Skin, they cannot do better than to possess Wilson.

A Manual of Examinations upon Anatomy, Physiology, Surgery, Practice of Medicine, Chemistry, Obstetrics, Materia Medica, Pharmacy and Therapeutics—especially designed for Students of Medicine; to which is added, a Medical Formulary. By J. L. LUDLOW, A. M., M. D., Fellow of the College of Physicians, Member of the American Medical Association, and one of the Consulting Physicians to the Philadelphia Hospital, etc., etc. A new edition, thoroughly revised and much enlarged. With three hundred and seventy Illustrations. 12mo., pp. 816. Philadelphia: Blanchard & Lea. 1857. (For sale by T. Richards & Son.)

The above title fully explains the character of the work under notice. As the author has stated in the preface: "This Manual of Examinations" has for its object "to give at a glance the principal points necessary to guide the student in the prosecution of his studies, and to revive his recollection of subjects treated upon in more voluminous works."

Time was, when even this explanation would not save "a Manual of Examinations," where the whole Science of Medicine is crammed into a nutshell to be "crammed" into the heads of students from condemnation. That time has past; students are now rushed through in such hot haste, that he who is able to cram the most deserves the most credit, for the whole course is a cramming operation. Seriously, though, we would recommend this book as one of the best of its kind, and to every right-minded student a most valuable aid in acquiring the Facts of Medical Science.

Principles of Medicine. An Elementary View of the Causes, Nature, Treatment, Diagnosis and Prognosis of Disease: with brief remarks on Hygienics, or the Preservation of Health. By CHARLES J. B. WILLIAMS, M.D., F.R.S. A new American from the third and revised London edition. 8vo., pp. 486. Philadelphia: Blanchard & Lea. 1857. (For sale by T. Richards & Son.)

This is one of those standard, well established works which has run through editions enough to prove the good opinion of the Profession. It needs no commendation from us. We would, however, make one remark here, for the benefit of students and younger members of the Profession (we take it for granted the *older* members have all read the book); the remark is this: that no works are so improving and so important, in the

beginning of a physician's career, as works on the *general principles of Medicine*. "General Principles" is the common sense of every science, and without some quantum of this philosophy special facts must ever remain in the mind of the gatherer, unlinked and undigested and, indeed, unavailable. The present treatise is one of the best, and is every way worthy the good opinion it has ever commanded from the Profession.

The Hand-Book of Practical Receipts, of Every-Day Use: A Manual for the Chemist, Druggist, Medical Practitioner, Manufacturer, and Heads of Families; comprising the Official Medicines, their uses and modes of preparation; and Formulæ for Trade Preparations, Mineral Waters, Powders, Beverages, Dietetic Articles, Perfumery, Cosmetics, etc. A Glossary of the terms used in Chemistry and Medicine, including old names, contractions, vulgar and scientific denominations; with a copious Index to all the Preparations. By THOMAS F. BRANSTON. First American, from the second London edition. 12mo., pp. 307. Philadelphia: Lindsay & Blakiston. 1857.

The present edition is the first appearance of this useful little work, in this country, though it has passed through two editions in England. From a careful examination of our copy, we feel warranted in giving the opinion, that it is a most convenient, comprehensive and useful book, either as a manual or as a book of reference. We do not hesitate to commend it to all for whose use the work has been prepared.

Manual of Physiology. By WILLIAM SENHOUSE KIRKES, M. D., Fellow of the Royal College of Physicians; Assistant Physician to, and Lecturer on Botany and Vegetable Physiology, at St. Bartholomew's Hospital. A new and revised American, from the last London edition—with two hundred Illustrations. 12mo., pp. 584. Philadelphia: Blanchard & Lea. 1857. (For sale by T. Richards & Son.)

The present new edition of the above work brings it up to the latest period of the science. It has been the Text book of many Colleges throughout the Union for years; and this last edition, with its two hundred illustrations, is well calculated to sustain its deservedly high character.

Treatment of Sore Nipples.—A friend, whose judgment and experience entitles his opinion to much consideration, assures us that equal parts (by weight) of glycerine and tannin is the best application for sore nipples which he has used. It is also an excellent remedy for chaps and excoriations of other parts. The tannin dissolves readily in the glycerine. We hope this formula will be as widely known as the celebrated tincture of benzoin cure, which has, we believe, been quoted in every medical journal in this country.—[*Boston Med. and Surg. Journal*.]

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ORIGINAL AND ECLECTIC.

ARTICLE XXXIV.

Dysentery,—Its Nature and Pathology. A Clinical Lecture, delivered at Jackson-street Hospital. By ROBERT CAMPBELL, A.M., M.D., Demonstrator of Anatomy in the Medical College of Georgia.

"As all the *normal* phenomena of the living organism are known to occur under the superintending influence of the Nervous System, and are dominated by it, so it is but rational to regard all *morbid* actions as being more or less influenced in their manifestations by *aberrated* nervous action."

[*Transactions of the American Medical Association, vol. x.*]

GENTLEMEN,—We have deemed it not inappropriate to select Dysentery for the subject of a few remarks to-day, as an important, and latterly, a common field of investigation—one, which must necessarily some time lie in your pathway and therefore, as a theme well deserving your attention. Moreover, we were particularly desirous of bringing to your notice, on some occasion, certain considerations, hereinafter to be discussed, concerning the nature and treatment of this disease, which have been derived from the observation and study of many interesting cases, hoping you may find them some day of practical benefit to you.

In an article transmitted us for publication, in the Southern Medical and Surgical Journal, (October No.,) entitled "*Cresote in*

Dysentery,"* which records the author's happy experience with this agent, occurs the truthful sentence—"As regards the treatment, there is less unanimity of sentiment than in any other disease that we have to contend with." And this is doubtless the result of the diverse and indefinite ideas entertained generally as to its pathology. Hence, we ever and anon see mustered into columns of varying length, a diversified array of evidences concerning different and antipodal remedial measures; which cause has had the effect of greatly mystifying the understanding of the profession at large, as regards the true nature of this disease, whatever that may be. Besides, the increased and epidemic prevalence of this alarming and often fatal malady in our Southern and the Western States of late years, has compelled a more peculiar interest in, and a more energetic inquiry into, its character and its treatment, upon those whose lines have fallen unto them in these un-pleasant places, and whose duty as well as prerogative it has been, to deal with the destroyer. And they have disclosed to us the result of their ratiocinations, upon whatever basis *their* interpretation of the nature of this disease, may have presented to them. Some practitioners are found still clinging to the Opiate and Astringent routine, as the sheet-anchor of their hopes, in order "to stop the bowels;" and whatever may be the unavoidable, though salutary interludes displayed upon the case, their Opium and their Tannin, with its host of representatives, and their Acetate of Lead, are sure to bear the palm. Anon, we hear one proclaiming the infallible potency of the Cold-Water Enemata—another, lauding Mercury, the indispensable back-bone of his medication. And again, the saline or purgative treatment has been much vaunted, and not without some array of substantiating testimony.

These may be said to be the leading, though antagonistic, doctrines before us, presented for our guidance, with respect to this very important matter of consideration. If "in a multitude of counsellors there is safety" always, we certainly should consider ourselves enlightened and feel at ease upon these premises; yet, may it not make confusion more confounded, when the experience of another is entered upon the record. But before commencing the detail of proceedings, it would be fair to premise briefly, the impressions derived, concerning the nature of that condition,

which constitutes Dysentery, from *our* interpretation of its symptoms, and which have prompted our course, not of entire innovation but rather of selection and amendment.

DYSENTERY, as it is known, from *δυσ* and *στίσις*, signifying *difficulty in the intestine*—the large intestine—is a term whose appropriateness and peculiar etymological adaptedness to the idea it embodies, furnishes at once, when considered strictly, a summary of the nature of the disease, which it is meant to designate, and at the same time, well nigh indicates the basis of the operations to be pursued, in answer to the symptoms, which come to us as complaints, wrung from this organ, in the distress, occasioned by its inability or *difficulty* in performing its normal function. For, Gentlemen, this is the *plaint*—the *com-plaint* of the bowels—*par excellence*, the “*bowel-complaint*” of which you have so often heard in common parlance. As in contra-distinction to this, it is also well known, that we have handed down to us, from a far-back period in the progress of Medicine, the compound word “*Diarrhœa*—pertaining to the small intestine—signifying the opposite state—an easy *flowing through*.”

If any apology should be required, for this descent into the construction or definition of the nosological nomenclature, we will but cite the almost universal blending and confusion of ideas, concerning these two diseases as is especially manifested in the similarity of their treatment. Forsooth, there appear to be some who require to be *reminded* of what, in this connection, they never knew, upon Pope's cute principle, that

“Men should be taught, as if you taught them not,
And things before unknown, proposed as things forgot.”

That condition which is implied and comprehended in the term Dysentery, is recognized principally by its two characteristic symptoms, viz.—*Tormina, recurring more or less frequently; and the almost immediate, subsequent and repeated defection from the bowels, of a jelly-like mucus, or muco-sanguinolent discharge, of inconsiderable amount, often, with long continued straining.*

The appearance of the discharges presents much variety, the amount of blood is subject to great variation, the passages being sometimes found without a trace, at others, consisting principally of the vital fluid, constituting hemorrhage; which may occur in less or greater degree, occasionally, even to an alarming extent. If the disease has continued for a length of time, the dejections

may have a curdled or granular aspect, presenting the appearance of whitish grains of coagulated lymph, suspended in a thin, serous fluid, or they may consist of bloody serum, or contain pus. Notwithstanding all this agonizing effort on the part of the large intestine, there generally appears to be a total suspension of the ordinary and natural evacuations, except, occasionally there may be voided, after extraordinary effort, attended with excruciating pains, a small scybalous mass; or, as is sometimes the case, the ordinary alvine discharges may continue to recur, with their wonted regularity, if not interrupted by the action of opiates.

The *Fever of Dysentery* appears to vary in type or character, with the degree of intensity in the local inflammation. Whatever may be their relative positions as regards cause and effect, or whichever phenomenon is prior to the other, is a matter not very well defined in all cases; yet, there is a correspondence between the intensity of the local symptoms and the degree or the type of the pyrexia, as is generally noticeable in the other phlegmasia. In reference to types of fevers, it is well known, that in our climate and it is presumable, that in every climate, if it were but recognized, in obedience to the known laws governing the nervous system, *periodicity* is a stamp impressed, with greater or less force, upon many forms of disease. Hence it is, that we see Dysentery accompanied with the intermittent or remittent fever, of greater or less distinctness; and as the fever intermits or remits, so will there be found a corresponding, temporary abatement of the accompanying phenomena. It is not uncommon to see cases set in with a violent chill, followed by high fever, which will continue to recur, unless prevented by Quinine.

This description does not comprise those cases of simple irritation in the large intestine, attended with dysenteric passages, without fever, which require for their relief, but a dose of Oil, to wash away all irritating substances, and a placebo, in the form of a decided opiate, to obtund the nervous sensibility of the irritated part. And, Gentlemen, it may be here added, that this is about the *only* place, where Opium as a curative measure or to check the frequency of the passages in Dysentery, is admissible, in accordance with its known qualities and a proper understanding of the indications to be met, in the treatment of the fully established disease.

The term "Typhoid Dysentery" has been much handled of late,

until the sound thereof has become as familiar to the ear as household words; while we must say, that either our experience has been too limited to have furnished us with a case to suit this, to us, contradictory phrase, or that, our apprehension of the ultimate nature and the characteristic and distinguishing properties of these two pathological conditions, so incompatibly associated in the above incongruous misnomer, is at fault, or at variance with their appreciation by others, though perhaps of more extensive experience. Diseases are dubbed *typhoid*, from some real or fancied resemblance to that pathological state called TYPHOID FEVER, which is *sui generis*—a unique condition of the whole organism, and found only in alliance with such complications, as its own peculiar disorganizing influence, acting through its own appropriate channels, may determine; and within the limits of our comprehension of them, we cannot accord to Dysentery a place among them. Typhoid Fever is essentially an a-sthenic disease, of long continuance and self-limited in duration, depending, we believe, as is in accordance with the rational interpretation recently set forth by our brother, Dr. Henry F. Campbell, upon a peculiar abnormal condition of the whole, ganglionic, sympathetic or *secretory* system of nerves; and whose symptoms are but manifestations of *this* condition of *this* system of nerves, wherever they may be found—whether in the state of the blood, the secretory apparatuses and surfaces, the integrity of the tissues, and in fact, in whatever sphere of organization, or in whatever property of function, over which, its influence may have control. Here, are no sthenic developments, no active inflammations, no agonizing pangs—the senso-motory apparatus of nerves, seeming to be obtunded and enfeebled, probably from depraved nutrition—the nervous superintendent of the blood-making process, being out of order; but the passiveness, quiescence and uniformity, which characterize the operations of this system in health, are developed into the obtuseness, sluggishness and continuousness, which mark its actions in this state of disease. The amount of congeniality between the two morbid conditions, denominated Dysentery and Typhoid Fever, may be estimated, when it is considered, that out of the vast number of Typhoid Fever cases, recorded by those assiduous statistical reporters, Louis of France, and Austin Flint of America, Dysentery has not appeared as a symptom or as a complication, in even a single exceptional instance.

The error of considering this a typhoid disease and naming it such, no doubt arises from the fact, that the influences at work here, if not soon successfully combated, are peculiarly favorable for inducing, in a marked degree, that state of enervation and enfeeblement of the system, which may supervene upon any active disease, when allowed from any cause, to rage unrestrained upon the powers of life, for a length of time. The spurious typhoid fever, succeeding other diseases of long continuance, then, is all that we can recognize in this application.

The *Liver*—whatever be the character of the manifestations; whichever be the organ unmistakably deranged, and however distantly located and unassociated it may be—the LIVER, Gentlemen, is made by many, the scape-goat of all the offences committed against good order and soundness, within the sphere of the human organism; and dearly has it been made to atone, for being placed, an organ, among the organs of humanity. There is no doubt, but that a deranged state of so important a recrementitious secerner and emunctory, may give rise to much damage, secondarily, to some of the other members of the system; and likewise, there are many primary conditions of the general system, fever for instance, which may injure and vitiate the action of this organ—so that it is as much sinned against as sinning. Notwithstanding, whatever be the history of such derangement, whether it exists as cause or effect, judicious aid is never out of place, should it occur in Dysentery, as it often does, or in any other disease. But the philosophy of saddling the Liver, with the charge of *producing* an inflammation of the mucous membrane of a portion of the large intestine, of variable locality, while all the remaining portions of the *primæ viæ* are intact, which inflammation is accompanied with paroxysmal fever and that assemblage of symptoms, constituting Dysentery—and which is also, often, epidemic, is so obscure, as not to be appreciable by our naked eye. And yet, there are many, who in the absence of a better pathology, have certified this accusation.

As regards the Pathology of Dysentery, Gentlemen, there is little necessity for dismissing it among the mysterious and inexplicable problems of our science, or reaching far after its explanation, in assumed connexions, which have no substantial basis—when a glance at its anatomical and physiological implements, reveals a more simple theory of its nature. There is an inflamma-

tion of some portion of the mucous membrane, lining the large intestine, which may occur from irritation continuously exerted upon that surface, whether that irritation be direct or reflected. It may be, that the faecal mass, through some ulterior cause, becomes detained in its transit along a portion of the canal, until it becomes inspissated and concrete, from the absorption of its fluid particles, the accumulation continuing and the amount of *difficulty* increasing, the longer this constipation lasts, until finally, the irritation, thus induced, is sufficient to call for relief, and incite an endeavor on the part of this violated organ, to rid itself of its hurtful incumbrance—and thus, an excito-motory and an excito-secretory process is instituted, which results in, or rather *constitutes*, the *local* element in this disease. The ulterior or more remote cause here referred to, would seem to be satisfactorily explained, by attributing it to an obtuseness, or we may say, a *paralysis* of the nervous supply of the part; which, if we take into view the fact, that the state of the bowels is in a great measure influenced by the condition of the great spinal centre—as is manifested by the effect of a counter-irritant, a mustard plaster, for instance, applied to the spine, being capable of enhancing greatly the action of a small dose of any laxative medicine—we may with propriety, venture to trace this effect, of the stagnation in this portion of the alimentary canal, to a *condition of the spinal cord*, as its remote cause. And if we still farther proceed to inquire after the ultimate *fons et origo* of causation, we must interrogate those influences in man's relation to the external world, which, acting upon the susceptibilities of his physical organization, are capable of thus determining, in an important part of the nervous system—which system enacts and controls all his vital phenomena, whether normal or ab-normal—that condition, which may give rise to the manifestations of this disease, apparent to our perception.

Probably, no fact is better established in pathology than the spinal origin of paroxysmal fevers—which, not always but often, are accompanied with an inflammation, attacking one or another organ of the body. And it is well understood, that the more serious the inflammatory action, the graver is the type of the fever, and *vice versa*. Now, Gentlemen, with such analogous traits before us, what is to forbid our classifying Dysentery among those affections—only differing, as it does in the peculiarity of office, and, therefore, in the singularity of construction, properties and

relationships of the organ diseased—and which but yields its own characteristic evidences of its suffering condition? As in accordance with the generally received opinion, relative to the exercise of those organs and those functions, which are under the superintending influence of the spinal system of nerves—that their operations are characterized by stages of action, alternating with periods of rest, or intermittingly—the intermittent character of the pains, as well as the other symptoms in Dysentery, may be also regarded as indicative of its spinal nature.

It has been said, that the initiatory stage of this condition was one of constipation of the bowels, (though this is by no means always the case,) where the effete mass was detained in its receptacle, the large intestine, probably, by the effect of obtunded sensibility or paralysis of its nerves. Now, this idea of paralysis would but illy comport with the known effects of spinal irritation, until it is recollected, that prior to that action being established in the spinal cord, which is denominated “spinal irritation,” there must be a stage of congestion or something akin to it, the effect of which condition in a nervous centre, the brain for instance, is known to be that of obtunded sensibility and loss of motion, or *paralysis*. Thus we see, and it is satisfactorily presumable, that whilst the initiatory stage of the intestinal affection is in progress, the inceptional condition in the nervous centre which probably determines it, is co-temporary with it; and in like manner, when the active process begins in the bowel, there is to be found a corresponding, simultaneous activity existing in the spinal cord, constituting spinal irritation—as evidenced by the paroxysmal fever, as well as those enhanced, spinal, excito-motory phenomena which pertain to this disease.

The only mode of incursion of this disease, heretofore noticed, and which has been used as the example, from being the most common, is that with constipation; although, as it has been remarked, this is by no means the invariable rule, as it is sometimes preceded by diarrhoea, as well as being also, occasionally, accompanied with that affection.

That these are *excito-secretory* phenomena, is an opinion originating with Dr. Henry F. Campbell.

If, in our conjectures concerning the implication of spinal disease in the constitution of Dysentery, we are correct, it would be an interesting process of inquiry to seek an interpretation of the

rationale of this latter condition, through the aid of this newly discovered function of the nervous system. Then, we assume the position, Gentlemen, that the *diarrhœa* preceding and accompanying Dysentery is an *excito-secretory result*; while *Dysentery* itself, unaccompanied thus, is, for the most part an *excito-motory phenomenon*.

That condition in the nervous centre, which, when from its locality and anatomical connections, is favorable for exerting its influence upon the large intestine, is accompanied with Dysentery; when those relations obtain in reference to the small intestine, it is attended with diarrhœa—simply from the fact of the peculiar anatomical construction and functional endowments of this portion of the canal which, when under the operation of a like influence, yields its different and characteristic manifestations. Let us be understood—that in Dysentery there are two co-existing and co-extensive conditions, as manifested by their co-equal symptomatic results, viz:—*Spinal irritation*, and an *inflammation in the mucous membrane of the large intestine*.

It must be recollected, that the spinal marrow is in intimate connexion with a long chain of ganglia, belonging to the sympathetic or secretory system of nerves; which ganglia are again associated with others, among the abdominal viscera, &c. Now, any source of irritation, whether cold applied to the surface of the body,* or any which might have its origin in the mucous membrane of the large intestine itself, if conveyed to, and then reflected back from, this grand mixed nervous centre, the spinal centre—the nervous circle being complete and adapted to this direction of its force, might spend its excitation upon the muscular coat of the large intestine, if that be its terminus—giving rise to their in-

* "In the relation of the visceral nerves to the external nerves of the body, there is a sympathy established between the walls of the cavities of the body and the organs contained in them. It exists not merely between the skin of the cranium and the brain, between the skin of the neck and the larynx—where a vascular connexion might be conjectured—but also between the thoracic walls and the lungs, the abdominal walls and the abdominal viscera. Cold or warmth, or any other irritation of those external regions, operates immediately, either injuriously or healthily, upon the viscera situated beneath. . . . On the other hand, according to Rادمacher, in painful diseases of the liver, the abdominal muscular fibres of the right side are in continual spasmodic tension."—[*Henlé's General Pathology*.

Also, "A partial keen current of air falling on any portion of the skin may induce inflammation in any susceptible internal organ. An extensive burn or scald is apt to induce pneumonia."—[*Marshall Hall*.

creased, exaggerated contraction;* and also upon the abdominal muscles, if its centripetal energy be sufficient to reach the spinal marrow, the origin of the nerves of voluntary motion—occasioning the incontrollable straining,† and producing Dysentery, the excito-motory phenomenon. Or the same force arising in the mucous membrane of the large intestine or elsewhere, and reaching in its course the secretory ganglia, and being reflected back upon the mucous surface of the small intestine, would give rise to diarrhoea, the excito-secretory result—brought about, it may be, by an irritation radiating from an inflamed point in the large intestine.‡

In substantiation of this position we would but adduce the fact, familiar to every one, presented in the effects of stimulating enemata—the first simply evacuates the large intestine, but if persevered in assiduously, so great an irritation may be wrought up in the large intestine as to be reflected upon the upper bowels, and *they* are acted upon. Monthly-nurses seem to be aware of this result, for in the application of the soap suppository in infants, if decided action upon the bowels is desirable, they but persist in its introduction, beyond the number of times requisite to empty the rectum.

The spinal marrow being in a state of irritation, excitement or “polarity” would greatly fortify or enhance the reflected influence, and from its propinquity to, and intimate connexion with, the sympathetic ganglia, it is reasonable to suppose that they might participate in its excitement. So that, it would not be so great a stretch of imagination to suppose, the spinal ganglia of the sympathetic nerve as well as the spinal cord, to be in a state of *irritation* in these special cases.

* “Reflex motions and reflex sensations, from sympathies of the splanchnic nerves among each other, are principally apparent in pathological and physiological events. To reflex sensations we may attribute the pains which accompany spasm of the large intestines (colic), and contractions of the uterus. *Reflex motions*, as in external parts, *appear immediately under the irritated membranous regions*, as well from irritation of serous as of *mucous membranes*..... Still, single regions of the mucous membranes also stand in relation with very remote muscles.”—[*Henlé*.

† “The apparently involuntary contractions of the abdominal muscles in spasms of the bowels, parturition, tenesmus, and other affections, may be reflex motions proceeding from nerves of sensation.”—[*Henlé's General Pathology*.

‡ “There is scarcely a part from which internal inflammation—an excito-secretory effect—may not be excited.”—[*Marshall Hall*.

To resume: Then, in Dysentery, there are apparent two distinct elements constituting the disease—viz., spinal irritation, and an inflammation of the mucous coat of some portion of the large intestine. The former, is manifested by the paroxysmal fever, the tormina from spasmodic contraction of the muscular coat of the intestine, and by the straining or *forced* voluntary contraction of the abdominal muscles. The latter, by the character of the discharges, the great irritability of the surface of the organ at the point inflamed, as is indicated by the evidences yielded upon contact of the contents of the bowel—the more solid they be, the greater being the amount of irritation, as shown in the exaggeration of all the reflex phenomena on the passage of scybala; also, by the evidences derived from an examination by pressure of the hand, should the point of inflammation be above the pelvic cavity, it being always discoverable by tenderness on pressure, along the ascending, tranverse or descending colon; or if located in the rectum, where it is out of reach of manual examination, by the increased amount and frequent occurrence of tenesmus, and when used, by the great intolerance of all enemata.

These are the two conditions: That they have a connexion is sufficiently proven in their co-existence, and the sympathetic association in the degree of their manifestations: though the problem of priority of birth, or of what *one* has to do, with the origin of *the other*—*whichever* is the parent and *which* the offspring, is wrapped in more obscurity. But from the evidences already adduced, as well as from the testimony furnished in the application of the laws governing the operations of the various elements of the nervous system, herein implicated, we deem it more philosophical to suppose irritation in the central organ of the nervous system in question, to be more capable of determining such actions at the peripheral extremities of its motor and sentient nerves, under the circumstances, than that an irritation impressed upon the sentient mucous surface, could impart to the nervous centre, that species of persistent and intense excitement as is here manifested. And besides, we have the testimony implied in the fact, that the more decided evidences of spinal disease, chill and fever, &c., are often the first to make their appearance in Dysentery. Furthermore, in corroboration of these views, we will quote the words of a celebrated German neuro-pathologist of the present day*—viz., "In

* Henlé.

proof of the dependence of the vascular nerves upon the brain and spinal marrow, we may farther adduce,—the excretions of persons hanged, and of paraplegic persons, the cedematous swellings in the epidermis, and particularly in the serous and mucous membranes of parts which are paralyzed by injury of the spinal marrow, or lie within the affected parts, the inflammations and ulcerations in the kidneys and the mucous membrane of the bladder after injuries of the medulla spinalis, perhaps also the extensive abdominal inflammations which Schiff observed after section of the *thalamus nervi optici*. I will also here mention the inflammation of the *uvula* connected with inflammation of the cervical portion of the spinal marrow, the peritonitis and nephritis connected with inflammation of the medulla spinalis, *the gastro-enteritis, in hemorrhage, inflammation and ramollissement of the brain and spinal marrow,** the softening of the stomach in meningitis of the base of the brain," &c.

The patient in Dysentery is, as it were, between two fires—each having the power, through nervous communication, of lending force to the other with increasing energy and perilous reciprocity. Whenever an irritation is impressed upon the sentient and irritable mucous surface, and is conveyed to the irritable nervous centre, it is reflected back with redoubled force upon the muscular coat and abdominal muscles, causing their spasmodic action, compressing the tender mucous lining and straining or *wringing out the fluids, which furnish the discharges in this disease*: each spasm of the muscular coat of the intestine increasing the irritability of the mucous coat, the impression of which is again received by the nervous centre, and again retorted back with increasing vehemence—and so on, in fatal repetition of the round—the fever all the while, when it exists, lending its influence to this work of destruction. It will be seen, that the coats of the organ are disadvantageously arranged with respect to one another in this disease—the muscular coat surrounding the mucous lining, subjects the latter to pressure upon every contraction; especially, as its calibre is a canal through which *must* pass contents, having more or less solidity and resistance. And thus, may the effect of contact with a hardened fecal mass, be imagined, but cannot adequately be described.

The continuance of these perturbing and enervating causes upon the general nervous system—which have in themselves the

* These italics are ours.

elements of increase and multiplication *ad infinitum*, in a geometrical progression, the longer they continue unallayed—are sufficient, very soon, with the aid of the accompanying fever, to exhaust the energies of the constitution, by the excessive excitation and taxation of its powers—and not, surely, by diminishing the strength, as many appear to believe, through the draft upon the circulatory mass, in consequence of the frequent discharges. For, it should be distinctly understood, that *these are not passages*. In fact, there is generally very little loss of fluid, and that little is as nothing, in debilitating the patient, compared with the fatal torture and fatigue, with fever and loss of rest and sleep, by which

“ We see him day by day,
Wither'd on the stalk away.”

Thus, sooner or later, is ushered in that state of abasement of the vital energies—the pseudo-typhoid fever, or the Typhoid Dysentery, as many are pleased to term it; when the impressibility, power of conduction and reflection, of that portion of the nervous system first engaged and over-taxed, have failed—leaving it devoid of tone and paralyzed; for, by degrees, we may observe the tormina becoming of shorter and shorter duration, then consisting of a sudden jerking pang, at the time of a discharge, and finally, ceasing altogether—a bloody, purulent discharge taking place, from time to time, involuntarily. In support of this view of the subject, we find in the valuable work to which we have had occasion so often to refer, the following cursory expression of a coincident opinion, which although not given in reference to Dysentery, (as this book treats of no particular disease, but of the attributes of the nervous system *generally*, under the influence of disease,) yet may serve to furnish authority to the reasonableness of our ideas, concerning the pathology of this disease—viz., “Irritation and inflammation of the mucous membranes were for a long time described only in connexion with spasm of the corresponding muscular layers. Abercrombie first gave value to another opinion in reference to the intestinal canal, by demonstrating that not spasm, but a paralysis of the intestinal canal, was the cause of ileus (*iliaca passio*), which sometimes appears alone, sometimes in connexion with inflammation of the mucous membrane; in the latter case, the inflammation may be either present from the beginning, or only added to it subsequently. Stokes refers to these facts in order to explain how a *dilatation* of the bronchia may oc-

cur, in and after bronchitis. Now, if we look at these phenomena alone, there is an antagonism, of the *mucous* and *muscular membranes*, *irritation of the former with paralysis of the latter*. But another question arises, whether the internal connexion here is that of antagonism; whether the paralysis is occasioned through the interposition of nerves from the mucous membrane? Abercrombie expresses no conjecture concerning the relation of these two affections to each other. Stokes considers the *paralysis as secondary, the result of an exhaustion of the muscular power after its activity has first been sympathetically increased.**"

Of this condition, there appear to be—*two distinct varieties*, the difference depending absolutely upon the state in which the bowel is found upon the supervention of these latter symptoms. 1st. In one, the constipation still persists, or has not been overcome, in the upper portion of the canal. And it is surprising how long this state of affairs may exist, without being detected, or even suspected in the least, when all the while, *there, at that point*, remains the inexorable barrier to relief. This must be remedied, or the patient must finally succumb to an inevitable continuance of this consuming process. We would say, in passing, that the physician will always do well to see the dejections, to ascertain how many contain *faecal matter*, how much they contain, or if any at all—for if no *faecal matter* has passed, there has been no *passage*.

The diseased section of the intestine is unable to rid itself of its contents; being entirely paralyzed, it yields to the intrusion of an increasing incumbrance—becomes, it may be, stretched to the extreme of distension, forming a pouch, out of which the solidified accumulation cannot pass into the lesser calibre of the uninjured portion of the canal—and often pours out blood in a frightful manner, (nearly all the discharges consisting of pure blood,) which may pass in fluid form or in clots; or perhaps, being retained through the action of opiates, may undergo change and become disorganized and give a putrescent and most unbearable odor.

2d. In the other form of this low condition, the irritation having been reflected for so long a time upon the upper portion of the *primæ viæ*, we see, in addition to the purulent or bloody evacuations, a continuous and wasting diarrhoea. Higher up, the stomach becomes involved in some instances, and there are loss of appetite, nausea and vomiting, even of the blandest fluids—to

* The italics are ours.

gether with a red, dry tongue, quick and feeble pulse, entire prostration of strength, cold extremities and dullness of the mental faculties—and thus, the vital spark grows dim, flickers and goes out, unless again rekindled by its appropriate stimuli. It will be perceived, that the characters of the disease, in this form, have undergone a change—where there was Dysentery, there is diarrhoea with prostration. The nervous system having been overwrought, loses its excitability—becomes paralyzed. The mucous membrane of the large intestine having been racked and bruised, remains a passive, purulent, secretory surface, sometimes retaining the marks of its sore conflict for years afterwards, as is apparent from the evidences of chronic ulceration continuing for that length of time.

In this entire metamorphosis, the characters of the original disease have disappeared. It is not Dysentery, and *requires a change of management*. It is not Typhoid Fever, as shown in its history, and as is manifested, often by the sudden and almost miraculous recovery of cases, upon the application of its appropriate treatment.

And now, Gentlemen, from the foregoing considerations, so satisfactory to our mind, appears the interpretation which we have ventured to suggest, of the phenomena concerned in Dysentery, that we would risk the prediction, that ere long, in the progress of our science, by the light of the now dawning nervous pathology, such an elucidation of the nature of this important disease, will be more authoritatively and more clearly defined.

The *Treatment of Dysentery* will be made the subject of a separate Lecture.

On Scarlatina. A Clinical Lecture delivered in Paris, by M. TROUSSEAU. (Translated from the *Gaz. Hebdomadaire*.) Continued from page 672.

The *angina of scarlatina* is one of the most difficult diseases to describe properly or to recognize readily. To point out its simple or severe forms is, in general terms, easy; but it is not so with one of the varieties of the latter, which we shall study in its turn, in which diphtheritis arises as a complication, disconcerting the previsions of the physician, and giving to the angina of scarlatina a character of fearful seriousness.

Scarlatina is essentially an anginous disease, if you will permit

me this expression. However benign it may be, it is seldom that it is unaccompanied by pain in the throat, as it is seldom that *rubéola*, however light it may be, is unaccompanied by pain in the larynx. This pain in the throat is also met with in *variola*, and the presence of three or four pustules upon the pharynx explains it; but the angina of *variola* differs essentially from the angina of *scarlatina*.

From the first day of the disease, the veil of the palate is red, of a tint analogous to the skin, deeper however; the tonsils, slightly swollen, are of a violet color. As the disease progresses, after two, three, or four days, there appears upon one of the tonsils, sometimes upon both, small, whitish concretions, ordinarily of a milky white, at least when they are not discolored by any substance ejected from the stomach in vomiting. Examining them more nearly, by removing them with the handle of a spoon, you will perceive that they differ from diphtheritic false membranes; these of a yellowish white are adherent, and when they are seized, by means of forceps, they come off in shreds; the concretions of *scarlatina*, pulpy, but not adherent, have not the characteristics of false membrane, resembling rather those concretions which arise, for example, upon the surface of bad ulcers.

The disease progressing, the intensity of the angina may become so great as to interfere with respiration, and especially with deglutition; fluids taken, return by the nose; the voice becomes nasal, and the ganglions of the neck, principally those of the angles of the jaw, are engorged. When not interfered with by medication, or when a mild course of medication is adopted, this angina retrocedes with the disappearance of the eruption upon the skin of *scarlatina*. The tonsils throw off their concretions, remaining red, and sometimes excoriated: the disease is cured. The throat and tongue, however, still remain sensitive, and this excess of sensitiveness persists longer upon the first of these parts than upon the second. It ends by a kind of desquamation analogous to that which we have noted as taking place upon the tongue. Such is the ordinary form, the simplest form of scarlatinous angina. There are other more severe forms: there is one, in particular, to which I have already alluded, and which I have almost invariably seen to terminate fatally. I shall now speak of this form.

Some individuals are attacked with *scarlatina* of moderate severity: they are slightly delirious at night, restless, pick their bed-clothes; the pulse is quite frequent, and the soreness in the throat moderate. The disease passes to the eighth or ninth day; recovery seems certain; the fever abates, the eruption disappears, and the family feel secure. Suddenly a considerable engorgement is observed at the angle of the jaws, occupying not only this region, but the neck also, and sometimes a part of the face. A sanious liquid, fetid, and very abundant, flows from the nares. The tonsils are very voluminous, the breath is very offensive; the pulse suddenly

becomes very frequent and small ; the delirium re-appears, and other nervous symptoms re-arise ; the delirium continues ; coma succeeds, and, at the same time, the skin becomes cold, the pulse more and more feeble, and the individuals succumb, after three or four days, in a slow, painful manner, or die suddenly, as though from syncope.

How can this be explained ? It may be asked, if it be not diphtheritis which complicates the scarlatina ?—for these phenomena resemble so much the terrible forms of diphtheritis, those forms which destroy adults, as well as infants, before the croupal affection has had time to reach the larynx, the false membranes being confined to the nasal passages, the ears and fauces ; these phenomena resemble so much those terrible forms of malignant diphtheritis, that we are tempted to believe that it is not scarlatina, but this last woful disease, that has destroyed the patient.

I am the more inclined to believe this because, in some cases, the larynx is invaded. Graves cites some observations of persons who died of croup following scarlatina, or recovered from this exanthematic fever, after having thrown off tubular false membranes, moulded upon the trachea. Graves, in citing these facts, has reproached me with having mistaken this form of the disease. I had, in fact, heretofore mistaken it. I said : scarlatina does not love the larynx ; but during my service at the Children's Hospital, I found so extraordinary an identity between malignant scarlatinous angina and malignant diphtheritic angina, that I wavered in my opinion. Now I cannot help believing—although I dare not affirm it, my convictions not being sufficiently established,—that these phenomena of which I have just spoken, are none other than the symptoms of diphtheritis appearing at the close of an attack of scarlatina, as a most serious complication. Patients die, in fact, with all the symptoms of diphtheritic poisoning : general coldness, small pulse, fetidity of the breath, both by the mouth and nose, universal paleness of the skin, a frightful dissolution of the tissues—symptoms which are not found in any other kind of severe disease. It is possible that persons being subjected to particular conditions in the midst of an epidemic atmosphere—which is especially witnessed in hospitals for children, where diphtheritis is almost always present—it may be that the angina of scarlatina becomes the point of attraction for a diphtheritic exudation, absolutely in the same way as a little excoriation behind the ear, as an ulceration of the vulva, of the folds of the skin, as any other wound may, in persons placed in the same epidemic conditions, become the point of departure for the manifestations of diphtheritis. What tends to strengthen me in this opinion, is the fact that of all the anginas arising suddenly at the ninth or tenth day of scarlatina, I do not recollect to have seen a single case get well ; while for the angina scarlatina, even very severe, but commencing with the scarlatina itself, and reaching its height towards the sixth, seventh, or eighth day of the disease, for

this angina recovery is the rule, which often takes place without the aid of art.

When we take up the subject of the treatment of scarlatina, I shall speak to you of the treatment of the angina of scarlatina. Now I will simply say to you, that the croupal angina of scarlatina (I do not speak of that severe form to which I have drawn your attention, but the simple form which we have said is almost always accompanied with pultaceous croupal concretions), this simple croupal angina of scarlatina acts very differently from the severe angina, from diphtheritic angina; for while this is very mobile, and tends towards the nose and larynx, the other on the contrary remains generally limited to the pharynx, and for it I maintain the proposition which Graves has condemned; *Laryngem amat evitare*. The angina of scarlatina is then pharyngeal, very different from the angina rubeola which is laryngeal, and from the angina of variola, which is both pharyngeal and laryngeal. The voice of those affected with the angina of scarlatina is nasal, but it is sonorous; it does not undergo any other modification than that it meets with in passing into the mouth. In rubeola the timbre of the voice is, on the contrary, very often altered from its formation in the larynx; it is not modified in passing the throat.

In some cases towards the close of the disease, towards the decline of the eruption, other symptoms appear upon the neck, or elsewhere: these are the *bubos* of *scarlatina*.

All pestilential diseases are accompanied with bubos. Putrid fever has its mesenteric bubos, for you know that towards the ninth or tenth day of that disease the mesenteric ganglions can acquire the size of a pigeon's egg, and even more. Scarlatina, which is also a pestilential disease, has then its bubos. They occupy the cervical region; the lesions which determine their evolution are seated in the throat. From the commencement of the disease you will perceive the ganglionic engorgements upon the sides of the neck and at the angles of the jaw. Sometimes, towards the tenth or twelfth day, independently of the disorders produced by that severe form of angina of which I have just spoken, there will arise a sudden inflammation of these cervical ganglions; the skin reddens, becomes tense, and in four, five, or six days, a large phlegmon is formed. If it is opened pus will be found, and sometimes the cellular tissue which envelopes the ganglions is sphacelated. I recollect a young lad fourteen years old, in whom this gangrene was so extensive that the neck was dissected out as though by a diffused phlegmon, and the carotids were seen to beat at the bottom of this frightful wound; he got well, but retained a sad deformity. Graves reports an identical case.

These lesions can arise in other parts of the body, where ganglions do not exist, where at least they do not appear to have been the cause of the symptoms. In the young lad of whom I have just spoken, independently of the phlegmon of the neck, another diffused

phlegmon appeared the tenth day of the disease upon the leg, which produced a considerable shortening of the tendons and left the patient lame, to such a degree that he was excused from serving, when six or seven years afterwards he was drawn in the conscription.

Besides these acute ganglionic engorgements, besides these diffused phlegmons of the cellular tissue, scarlatina can also give rise to *chronic ganglionic engorgement*.

In infants which are not at all scrofulous, you can see as the consequence of scarlatina, chronic engorgements which commenced with the disease, and which persist two, three, or four months after recovery. In scrofulous infants, these engorgements often terminate in scrofulous ulcerations.

The *urine* during the period of the eruption in this disease, is sometimes *bloody*, and often *albuminous*. It has been estimated, that in this period of serious cases of scarlatina, albuminuria is present one time in three. You know that this alteration of the urine is also frequently observed in typhoid fever, in erysipelas, in variola, and in other affections. Although frequent in the acute periods of scarlatina, albuminuria does not constitute a symptom very different from the albuminuria which is observed, more rarely it is true, in other affections which we have designated.

There is another symptom which is also seen in the acute period of scarlatina, *rheumatism*. The rheumatism of scarlatina is a very common symptom, but as it does not exhibit itself by the symptoms general to ordinary rheumatism, as it is limited in most cases to three or four articulations, and principally to that of the wrist, it is often mistaken. However, by carefully questioning the patients, by examining carefully their articulations, by pressing carefully upon them, articular pains will be discovered in perhaps a third of the cases. This is important, for in the course of the disease, you will often see acute symptoms arise in the joints, general arthritis, and also frequently pericarditis, endocarditis—affections upon which M. Thore (of Sceaux) has recently published some excellent works—affections indicated by Graves, which I have observed myself, and which appear to me to be of a rheumatic nature. These rheumatic symptoms often have as a result another disease, *chorea*, which is witnessed in young children.

Desquamation commences the 10th or 15th day; it may last till the 16th or 17th day, as we have at present an example in No. 7, in the women's ward. It is apparent first upon the neck and chest, then upon the limbs, upon the back of the hands, upon the palm of the hands, and finally, upon the bottoms of the feet.

Upon the body this desquamation has peculiar features, but which are still more characteristic upon the hands and feet. Upon the body it takes place in scales, which are often no larger than 2 or 3 millimetres, and which again are one, one-and-a-half, and two centimetres in size. Upon the arms, upon the legs, where the epidermis is a little thicker, they may be four to five centimetres in size, the

epidermis may be raised in large bands, as after erysipelas and phlegmons, but this desquamation has never the furfuraceous appearance of the desquamation of measles. In rubeola, these scales are so small that they have to be attentively examined to see them, and often they can only be seen by brushing, so to say, the skin of the patients with the sleeve of your coat, in order to collect the fine powder which this eruption produces. Upon the hands and feet, the desquamation of scarlatina is so distinctly marked that it is impossible to mistake it. There the epidermis is elevated in great patches, resembling pieces of a glove. The desquamation of the feet is the slowest; in some cases the nails, which are, as you know, an epidermic production, fall. This is rare, but it has been observed, and Graves cites a case.

We have still to study scarlatina in the symptoms which arise during its period of decline, and again in its elementary forms, that is to say, in the forms which it assumes when it ceases to present its habitual characteristics, when it is so altered, that unless it be examined attentively, in many cases it would be impossible to recognize it. This part of the history of scarlatina is certainly the most important to study, less on account of its nosological relations than its practical relations.

Of these symptoms, some may be considered as immediate, others as mediate, arriving much later.

The first are the *nervous symptoms*. A person is cured of scarlatina—he is convalescing,—you have no longer any anxiety on his account, when suddenly vomitings take place similar to those of the commencement of the disease; with the vomitings come delirium, a terrible agitation, a great frequency of pulse, and the patient dies in coma or with convulsive symptoms. Still there is no anasarca, no albuminuria, no hematuria, nothing which can explain these phenomena. These symptoms are not only seen in children but in adults also. These symptoms arising in the course of the disease have, you see, a much more terrible signification than they have in the first period, and yet they are then very serious. I could not then tell you too emphatically that in scarlatina, you cannot regard your patient as cured until a long time after the cessation of the last morbid phenomena. There is no disease which shames the physician more, there is none in which one is more subject to errors of prognosis, and these errors are inevitable. The fever has subsided, only a very few slight symptoms remain, you announce a cure, and yet the disease is still formidable, it will kill the patient with great rapidity, and this cannot be foreseen.

Among the immediate phenomena of this period of decline, which takes place during desquamation, *anasarca* is one that deserves your particular attention.

This symptom appears not in the most severe form, but rather in the moderate form of scarlatina. It afflicts the convalescents not only when they are exposed to cold, when they have committed

some imprudence, some dereliction in diet, but when surrounded with the very best care, and attended to with the most constant solicitude.

Anasarca often appears in the most sudden manner. It invades the face, the whole body, in some cases it is so great, that an infant, for example, which the evening before you had left thin and pitiful, seems to you the next day fat, on account of the enormous puffiness which he presents.

This swelling reaches its maximum in twenty-four hours; it is universal, and to a degree which you will rarely find in anasarca, consecutive to organic disease of the heart, or Bright's disease. In other cases, on the contrary, the anasarca is very slight, and is limited to the face, and to the extremities; but it is accompanied by a remarkable paleness of the skin, and it is almost always preceded or accompanied by hematuria.

Hematuria is a symptom in fact very common in scarlatina, although frequently it is not recognized. If the blood be pure, if it be only slightly altered by mingling with the acids of the urine, which is then of a black color, this hematuria is discovered and pointed out by the parents, but it is not noticed when the bloody secretion is slight, the urine remaining of a rose color. The color of bloody urine can also be greenish like whey, a color essentially different from that of the urine of Bright's disease, and from all other kinds of urine. The first few days the micturition of blood may be so great, that the urine can deposit at the bottom of the vessel used in experimenting, blood globules forming a precipitation one or two centimetres in depth. The urine then looks like a strong solution of rhatany. According as the disease progresses, the urine is colored as we have said, but blood can still be recognized by the altered globules which are found adhering to the sides of the glass, or by the enormous quantity of albumen contained in the urine. When this is heated or treated by nitric acid, you do not get a white albumen like that which is obtained in Bright's disease, but a brownish albumen, or a dark colored albumen analogous to that of acute albuminuria.

Ordinarily children recover under a hygienic treatment easy to give them; but in other cases, notwithstanding this treatment, the anasarca, when it is great, and when it has come on rapidly, carries off the patients by producing various symptoms of which I shall now speak.

At times some complain suddenly of a violent pain in the head, attended with difficulty in the sight: *convulsions* are then to be feared. It is well to know this fact, for upon the one hand it is important to announce to the families what is to be expected, and on the other hand, in some cases you can ward off these attacks. To hold the head elevated, to place the legs hanging over the side of the bed, and to administer an active purgative, are the means efficaciously employed under these circumstances. But most generally

the convulsive attacks come on, whatever may be done, and sometimes immediately destroy the patient. In other cases they are repeated rapidly with intervals of an hour and a half, an hour, or of an half hour; they are almost continuous, one hardly terminating before another commences, and the patient succumbs in a stupor and coma unless prevented by active treatment.

At other times the anasarca reaches to the more profound parts. I have seen it attack the veil of the palate, the uvula, the epiglottis, the aryteno-epiglottic ligaments, and in the infant in whom these lesions were present, the symptoms of *œdema of the glottis* arose; he owed his life to an active cauterization of the superior part of the larynx. Cases of persons carried off by an œdema of the glottis, during the anasarca of scarlatina, are not rare. Death takes place the more readily, because the throat having been attacked by inflammation, that inflammation has extended to the aryteno-epiglottic ligaments, and the tumefaction produced by the œdema, is added to the swelling consecutive to the antecedent phlegmasia.

There are other symptoms which arise during the decline of scarlatina, which are much less known, although they are more so than formerly; I speak of malignant pleurisies, of pericarditis, and of rheumatism.

When we speak of eruptive diseases, we say that rubeola invites the thoracic diseases. This is true, for rubeola first attacks the bronchial tubes,—it declares itself there before it manifests itself upon the skin, as scarlatina manifests itself by a pharyngeal angina before any eruption of the skin. The first symptom of rubeola is pulmonary catarrh, and from this it can be easily understood how that, when this catarrh is more severe than usual, inflammations of the lungs are frequently produced. Thus when on the seventh or eighth day of a rubeola the patient is still feverish, you can be almost certain that he has either an acute catarrh or a pneumonia, or even a pleurisy.

Authors agree on this point, that, on the contrary, in scarlatina the thoracic organs are respected. They are, it is true, in the acute period of the disease, but they are not so in its decline. It is quite common, in fact, to see in some affected with anasarca, and even in others who are exempt from it, symptoms of disease of the chest suddenly supervene. The lungs in this case are not attacked as in rubeola, but the serous membranes, the pleura, and the pericardium.

These pleurisies of scarlatina are ordinarily malignant, not only on account of the rapidity with which the effusion takes place, but also on account of the quality of the liquid effused. At the eighth or tenth day of the pleurisy, the liquid is often purulent like that of a puerperal pleurisy. The cause of this production of pus is a general infection. On which account the eruption, the inflammations of scarlatina, have an extensive tendency to suppuration.

At the Children's Hospital, I operated for paracentesis of the

chest upon a child sick with scarlatina, who at the 12th day already had pus in the chest. In a little patient of whom I shall soon speak, and who had anasarca without having had any eruption of antecedent scarlatina (this however prevailed in his family), I also punctured the chest for a pleurisy at the twelfth day, and drew off 750 grammes of perfectly formed pus.

You will never observe anything similar to this except in those who are under the influence of a diathesis of suppuration, as are, for example, women in the puerperal state. There is, then, in these symptoms of scarlatina the influence of the malignity which you will find again further on.

This cause of suppuration, so active in pleurisy, is less so in pericarditis. In truth, this is more seldom and comes on more tardily.

This phlegmasia of the pericardium, pointed out by Graves, has been particularly investigated by M. Thore, of Sceaux, to whom we owe the fact of having established the relation, existing between this affection and scarlatina. M. Thore has demonstrated that a certain number of individuals, during the convalescence of scarlatina, take pericarditis, mortal for some, curable for others.

We have said that articular rheumatism was one of the most common symptoms of scarlatina, more so than is generally supposed. Graves intimated this fact. "In a great number of cases," he writes in his Clinical Lectures, "I have seen articular rheumatism follow scarlatina." Yet it has been overlooked, and for many years I insisted upon this remarkable coincidence. Generally, and what is singular, rheumatism in this malignant disease is not very severe; it usually gets well of itself without any intervention of therapeutics. Still this existence of the rheumatismal diathesis explains to a certain degree, the appearance of pleurisy and pericarditis; it enables us to understand why these affections are so common, and how *endocarditis* can arise, for it also follows scarlatina. The rheumatism of scarlatina at first usually attacks the articulations, then the serous membranes of the heart, and the pleura. In some cases, from the very first, it invades the thoracic organs without touching the articulations, like ordinary rheumatism. Sometimes it takes that terrible form, the suppuration form, which kills without mercy. It is as the sequel of scarlatina or of puerperal fever that we most usually observe *suppurative rheumatism*. At first it seems simple, for a few days, the articulations become more painful, a more intense fever comes on, delirium supervenes, ataxo-adyynamic symptoms appear, and the autopsy reveals the presence of pus in the articulations and in the sheaths of the tendons.

Such are the immediate symptoms of the decline of scarlatina. Other mediate symptoms coming on later, are allied to the first, and among others is *St. Vitus' Dance*.

In children you will see this disease follows very soon after scarlatina, supervening six weeks, two months or three months after. The remarkable works of M. See have thrown much light upon the

relations existing between rheumatism and St. Vitus' Dance. It is very seldom that children escape the last affection when they have suffered from the first, as it is also rare (but this proposition is less absolute than the preceding) to find a child who has had St. Vitus' Dance who does not afterwards have the symptoms of rheumatism. In chorea consecutive to scarlatina, the bellows murmur indicating the pericarditis which had preëxisted, sometimes the friction sound of the pericardium, manifestations of the rheumatism of scarlatina, show that it is through this rheumatism that St. Vitus' Dance is allied to scarlatina, constituting one of its mediate symptoms.

I shall pass rapidly in review other symptoms, such as the *chronic suppuration of the eyelids*; the *chronic suppuration of the nose*, which may result in necrosis, tumors, lacrymal fistulæ; *suppuration of the ears*, resulting in *perforation of the tympanum*, *partial deafness*, *eries of the petrous portion of the temporal bone*, and consecutively *facial paralysis*. We also merely cite the *chronic inflammation of the lymphatic ganglions*, principally the ganglions of the neck, producing scrofulous swellings in those of a tuberculous diathesis. These symptoms are also quite common.—[*American Med. Monthly*.

[To be concluded in the Jan. No.]

[We seldom copy Reviews into our monthly journal, but the following from the pen of Professor J. C. Dalton contains such a comprehensive condensation of two most valuable and interesting works, that we venture to present it to our readers, trusting that they will not begrudge the space thus occupied.]

Adulterations Detected; or Plain Instructions given for the Discovery of Frauds in Food and Medicine. By ARTHUR HILL HASSALL, M. D. London, 1857.

On the Composition of Food, and how it is Adulterated; with Practical Directions for its Analysis. By W. MARCET, M.D., F.C.S. London, 1856.

The subject of the adulteration of drugs was first brought before the notice of the American Medical Association at its annual meeting at Baltimore in 1848. A communication was then read by Dr. T. O. Edwards, at that time member of Congress from Ohio, in which an exposure was made of the great prevalence of adulteration in imported drugs, and the evils necessarily resulting from it. The Association at that time presented to Congress a memorial on the subject, recommending prompt legislation; and a bill was accordingly passed, the same year, providing for the appointment of drug inspectors in all the principal ports of entry, whose duty it should be to examine critically all medicinal articles imported into the country, and refuse admission to such as were

adulterated or in any way deficient in quality. These inspectorships have been continued from that time to the present.

The exposures which were made, at the period referred to, of the worthless character of many imported drugs, attracted immediately the attention of the profession, and will no doubt be fresh in the minds of many of our readers. The discovery that they had been for some years employing in practice opium from which the morphia had been wholly or in part extracted, or scammony which consisted of scammony, flour, gamboge, and chalk, equal parts, was naturally calculated to excite a lively interest in the minds of practical physicians. It was very evident that some check to this wholesale and injurious adulteration was absolutely necessary; and the appointment of the government inspectors, mentioned above, offered the most direct and efficient means of arresting the evil.

It appears that this measure has been productive of considerable benefit. Six months after the law went into operation, Dr. Edwards made a report to the Secretary of the Treasury, in which he designated the following as the beneficial effects which had resulted from its operation:—

1. An elevation in the quality and purity of the medicinal agents imported.
2. An entire prevention of adulterated and deteriorated drugs from entry and use.
3. No embarrassment to the honest importer and dealer.
4. An increased revenue.
5. Protection to the medical profession and community, an increasing confidence, and an earnest desire on the part of the people for the continuance of the law and its faithful application.

The effect of the law was soon felt, it was said, by the European exporters, so that they ceased to send worthless medicinal articles to this country, as formerly; and consequently a much smaller proportion of the imported drugs were condemned during the second than during the first year after the establishment of the law. Indeed, a committee of the Association were informed by Dr. Bailey, drug inspector for the port of New York, in 1849, that not one-tenth of the spurious and adulterated articles arrived at that time that there did before the passage of the law. The uneasiness of the profession, which had been excited by the unpleasant discovery of the extensive existence of adulteration, was, therefore, somewhat quieted by the assurance that the evil was effectually arrested, or at least in a fair way to become so.

At the same time, however, a certain degree of suspicion remained behind, that the remedy which had been adopted was not, after all, completely effectual. Dr. Edwards was very possibly right when he claimed, as one consequence of the operation of the law, an entire prevention of adulterated and deteriorated drugs from entry; but it is by no means certain that it would as effectually

ally prevent their use. If the foreign dealer and manufacturer found it a profitable business to adulterate before importation, there is no reason why our own should not find it equally profitable to adulterate them afterward. The foreign adept in this kind of manufacture need not even allow the business to be taken out of his hands. It would only be requisite for him to establish a "New York Branch" of the original London or Brussels establishment, and he might then continue his operations with the same facility as before. These considerations, accordingly, still weighed with the minds of some of the profession, and prevented their being entirely satisfied with the establishment of the drug inspectorships.

The American Medical Association, furthermore, at their meeting, in 1848, appointed a committee of five to report at the next meeting—*first*, the nature and extent of the sophistication and adulteration of drugs, as practised by the wholesale dealers and retail druggists; and, *second*, the best means for the prevention of the evil in its various forms.

Such a report was accordingly made in 1849. The committee state that they have made inquiries of wholesale and retail dealers respecting home frauds, "without obtaining much exact information," the dealers being found "unwilling," from some cause or other, "to give any statements except of a general character;" exciting, in this way, a natural suspicion that home adulterations had already, to a certain extent, taken the place of the foreign. The committee appear to have ascertained, the existence of adulteration in many articles of domestic preparation, as well as in some of foreign manufacture which had passed the custom-house in a pure state; and they come finally to the conclusion that "there are enough" in our country "ready to engage in such dishonest work on a large scale, and so great is the temptation, now that foreign adulterations are excluded from our ports of entry, and the prices of medicines consequently enhanced, that it will require the utmost vigilance of this Association and of the public to prevent their carrying it on."

Notwithstanding this, the committee for 1850, to whom the continued consideration of the subject was intrusted, reported, in general terms, that domestic adulteration seemed at that time not to have increased, but even rather to have diminished; and that adulterated medicines were "not commonly vended in our large cities" (unless by those engaged in the sale of nostrums), except under certain particular circumstances. What these particular circumstances were, did not very clearly appear from the report of the committee. In fact, the special instances mentioned in the report showed so much impurity in the drugs actually in the market, as rather to contradict the conclusions just cited; as, for instance, where samples of rhubarb and cinchona obtained in Boston, were respectively only one-half and one-eighth the proper strength;

and where, of fifteen samples of blue mass, obtained in St. Louis, only one-third gave an approximation to the official proportion of mercury. Cod-liver oil, again, was found to be so extensively adulterated that "hardly a tenth," it was believed, of what was sold under that name was genuine, being either refined whale or sea-elephant oil. It seems rather difficult to reconcile such facts as those with the belief that adulterated medicines were "not commonly vended in our large cities."

Still, the report of this committee was, in its general conclusions, rather calculated to quiet the agitation of the subject of adulteration, and to convey the idea that it was, on the whole, not a very gross evil, at least in the Atlantic cities. The committee suggested as remedial measures the following:

1. That the various State and local medical societies be requested to annually appoint boards of examiners, whose duty it shall be to procure specimens of drugs from the stores within their limits, for examination, and report upon the same to their respective societies at least once in every year.

2. That the respectable druggists and apothecaries throughout the United States be requested to take active measures for suppressing the fabrication and sale of inferior and adulterated drugs; and that it be respectfully suggested to them, wherever practicable, to form themselves into societies or colleges for the promotion of pharmaceutical knowledge and general improvement in their profession.

3. That a committee be appointed, consisting of one member from each State here represented, whose duty it shall be to collect information in regard to spurious and adulterated drugs, and report the same at the next meeting of the Association.

These suggestions were adopted by the Association, and a committee appointed accordingly; but nothing has since been done, so far as we know, in regard to the matter. Practically, the whole work of protecting the community against the use of adulterated medicines has been left, since 1850, to the custom-house inspectors appointed by the law of 1848.

Now, we believe that the almost universal verdict of medical men, even in the large Atlantic cities, at the present time, will be that this law has been *practically ineffectual in preventing the extensive sale and employment of spurious and adulterated drugs*. The complaints of constant disappointment in the operation of simple and important drugs, which ought to be reliable, and of their extremely variable efficacy, were never more frequent than at the present moment. There can be little doubt that the general skepticism as to the efficacy of therapeutical agents, now so prevalent among physicians, and which has been almost constantly on the increase, is at least partly owing to the deteriorated quality of the drugs themselves. The inefficiency of the custom-house examination depends probably upon two causes. First, the inspectorships

are liable, we regret to say, like almost all other government offices in our country, to be regarded as purely political appointments, and to be conferred on purely political grounds, with but little if any regard to the professional qualifications of the appointees. It is to be feared that this mode of conferring appointments has become so interwoven with our political system as to leave but little prospect of modification for the better, and little security for the capacity, or even the integrity, of the inspectors. Even if this were not the case, however, and if we could be assured that none but genuine drugs were ever allowed to enter our ports, there would still remain a second and much greater difficulty, and one entirely beyond the reach of any custom-house supervision: that is, that drugs, as we have already intimated, are just as liable to be adulterated after as before importation. The same inducements for it are held out to the unprincipled dealer and manufacturer, and the same injurious results to the community follow from its practice.

Dr. Hassall, whose book on the adulteration of food and medicine has more recently called attention to the subject, indicates the only effectual mode of detecting these impositions. Adulterations must be detected in the samples sold or kept for sale by the retail dealer. All other inspections, whether of the crude imported or domestic material, or of the recently manufactured or wholesale article, though useful to a certain extent, must necessarily be incomplete; since adulteration may be, and certainly is, practised, according to the observations of Dr. H., at any point between the custom-house and the counter of the retail druggist. In England an excise law exists, similar in its operation to the inspectorships of the United States; and yet the amount of adulteration practised in the former country, in articles of both food and medicine, is so extensive and scandalous as to excite the indignation of any who will take the trouble to read over the details which this book presents. *Scammony* made up of "guaiacum and jalap, with woody fibre, cellular tissue, and other insoluble matter;" *powdered jalap*, consisting, for one-third of its bulk, of rasped wood; *ipécac.*, containing "large quantities of carbonate of lime or chalk;" *quinine*, containing gum, starch, chalk, stearine, carbonate of magnesia, &c., &c.; such are the drugs which are actually in the English market, and in daily use by practising physicians in that country.

Now it is a very essential question for us whether we are any better off, in this respect, than the English. We seem to have settled down, since 1850, into a somewhat quiescent state about this matter, trusting to the existing laws for protection. It has already been shown that these laws do not and cannot protect us. Supposing the custom-house requirements to be thoroughly and fairly carried out, the nine years which have elapsed since 1848, have certainly afforded time enough for a tolerably active and quick-witted people to learn all the tricks that were formerly done

by foreigners, and to gain sufficient experience for successfully practising them at home. Some further precautions, therefore, must be adopted, unless we are willing to continue in the use of such medicines as are to be found in the market at present. A few reflections, suggested for the most part by Dr. Hassall's book, will show that the subject is fully deserving of all the consideration we may bestow upon it.

Adulteration consists in mixing with the genuine article other substances of inferior value, which increase its bulk and enhance accordingly the profits of the vendor. The foreign substances which are selected for this purpose are usually such as may be readily incorporated with the original article, so as not to be easily detected by ocular inspection. They are, in many cases, simply negative in their properties; and so far, the effect of the adulteration is merely to diminish the efficacy of the medicine; as, for example, where opium is adulterated with clay, or alcohol with water. This adulteration may be carried to such an extent that the properties of the original article are, for all practical purposes, entirely destroyed; and it then amounts to a complete substitution of other materials for those of which it should properly be composed. Hassall states for instance, that samples are occasionally to be met with, professing to be scammony, which "do not contain a particle of that drug, or small proportions only," and are made up of a variety of ingredients, including even wood and ivory-black.

In most cases, however, the simple adulteration of a drug with an indifferent substance, or its dilution, as it might be called, is not the only or the most important alteration which it is made to suffer. The admixture of large quantities of foreign material necessarily impairs the sensible properties of the drug; and these must be restored or imitated as well as possible, by a further adulteration. Thus Cayenne, according to Dr. Hassall, is extensively adulterated with ground rice, and its colour afterward restored by the addition of red lead, or even the red sulphuret of mercury. Mustard is adulterated first with wheat flour or clay to increase its bulk, then with red pepper to give pungency to the mixture, and lastly with turmeric or chromate of lead to restore its colour. The purchaser is, therefore, not only defrauded of the article which he wishes to procure, but is supplied at the same time with other materials which are absolutely injurious.

It would seem almost superfluous to point out the injurious effects of such practices, and their disreputable character; and yet there is a tendency in the minds of some, resulting principally from a too hasty consideration of the subject, to overlook some kinds of adulteration as unimportant, or to palliate them as excusable. This has sometimes led to a distinction between injurious and harmless adulterations; the former class including those cases in which deleterious substances, such as red lead or arsenite of

copper are fraudulently introduced into the mixture; the latter including those in which the bulk of the article is simply increased with some indifferent substance, as where milk is adulterated with water, or calomel with chalk. The slightest consideration will show, however, that *all* adulterations, especially in medicinal articles, are injurious and dangerous, as well as fraudulent. If we prescribe six grains of calomel to a patient who requires the operation of the drug, and three grains of the powder which he takes under that name consist of chalk, it is not merely a pecuniary loss which he suffers, but an actual bodily injury. Even should the adulteration be detected the next day, its effects cannot be counteracted by giving another similar dose of pure calomel; for the time for the most favourable operation of the drug has passed, and the patient's illness is, at the very least, prolonged for twenty-four hours. It is easy to see that much more striking cases than this, and cases quite as likely to happen, might readily be cited. But it is not necessary. There is plainly no proper distinction, except in degree, as to the danger of adulterations in medicine. They are all injurious; and those which are ordinarily the least so, may at any time become extremely dangerous, owing to the accidental circumstances of the case.

But there is another excuse which we frequently hear from those engaged in the trade, and which is too often allowed to pass current, to a certain extent, even among professional men. It is the following: There are, it is said, in all articles of merchandize different grades of quality, corresponding to the means and taste of the purchasers. Articles of the first quality, which necessarily bear a high price, are within the reach only of the wealthy; inferior goods, at a cheaper rate must be supplied to the poorer classes, for they would otherwise be obliged to go without altogether. Accordingly, there are always to be found in the market goods of these different qualities with corresponding prices. It must necessarily be so; and in the drug trade as well as in others. There is no fraud in this, it is said. On the contrary, it is perfectly well understood that the higher priced articles are always the best, and the cheaper of an inferior quality. If the customer is willing to pay for the best article, he can have it. If he prefers to purchase at a cheap rate, he can be accommodated with an article, corresponding in quality and in price.

Now, it will be observed that the above excuse or explanation, plausible as it seems, rests entirely for its justification on the presumption that the varying quality of the article, corresponding with its price, is *perfectly well known to all parties, purchaser as well as dealer*. So long as this is the case, the variation in quality is not a fraud upon the public, but rather an accommodation. When a man buys a fine broadcloth coat for thirty dollars and a rough pea-jacket for five, he understands perfectly well the reason for this difference in price. It is evident on mere inspection of the

articles; and so long as the articles are good of their kind, and actually are what they profess to be, no harm is done, and the transaction is strictly honorable.

But the case is very different when the inferior article is fraudulently made to resemble the better one, and sold as actually being such. There is a certain class of dealers in clothing, who make a business of getting up, in his way, garments of sham quality; smooth and lustrous externally, but put together of such inferior materials, and in such an inferior manner, that they are ready to fall to pieces after a few week's wear. They are sold at a less price than similar garments of the best quality, but they are sold as really being such; and the unsuspecting purchaser is led to believe that he is really obtaining a good article at a lower price than he could get it for elsewhere. This kind of trade is properly regarded everywhere as dishonest; and those carrying it on are not considered as belonging to the class of respectable tradesmen.

Now, the adulteration of drugs, for the purpose of supplying a cheap and more saleable article, is the same kind of transaction with that just described. There is, and can be, in the nature of the case, no difference in the quality of the real drug. Scammony is scammony, and sulphate of quinine is sulphate of quinine; and always of the same composition. But when scammony is mixed with guaiacum and the mixture sold as scammony, or when sulphate of quinine is adulterated with chalk, and the mixture sold as sulphate of quinine, such a transaction is nothing less than the sale of one article in place of another, and is therefore fraudulent and disreputable. It is useless to say that the cheap article cannot be supposed to be as good as the high-priced one, and that the fact of its adulteration is well known to the trade. *The consumer does not know it.* The consumer buys the article, supposing it to be scammony or quinine, and not a mixture of worthless or deleterious substances. In this fact lies the fraud. The truth is, the dealer in adulterated medicines is not guided by any desire to accommodate the public, but simply to enhance his own profits: for though the spurious mixture is sold at a less price than the pure article, it brings a higher price in proportion than it is really worth. Thus coffee is adulterated with an equal bulk of chicocory, and the mixture sold at a price intermediate between its real value and that of pure coffee. Opium, from which the morphine has been extracted, is sold as a low-priced opium, when it is in reality altogether without value.

The matter, therefore, becomes perfectly simple, as soon as subjected to a moment's examination. The keeping and vending of adulterated drugs are fraudulent, no matter what may be the mode or manner of its performance. It is to be regretted, therefore, that in the report of the Committee on Adulteration, made to the American Medical Association in 1850, some expressions oc-

cur, which might be regarded as palliating its practice to a certain extent among the trade.

"Extensive inquiries among physicians, manufacturing chemists and druggists," say the committee, "have led to the following conclusions: *First*, that the wholesale druggists in the large cities, equally in the South and West as in the Eastern States, who are not specially engaged in selling nostrums, either as proprietors or agents, conduct their business on fair and honourable principles. As a general rule, they buy their choice chemicals from those who manufacture them, and either import other articles, or get them directly from those who do; and are always disposed to supply good articles to customers who are willing to pay a remunerating price. At the same time, many of this class keep inferior articles which they dispose of for a corresponding price to physicians and storekeepers who insist on buying at reduced rates."

Now, it is difficult to reconcile this trade in "inferior," that is adulterated, drugs with "fair and honorable principles" of business. These adulterated drugs are purchased by the retail dealers in order to be sold as genuine. It is not true that the public are ever parties to the transaction; or that they prefer a cheap article knowing it to be adulterated. No man, suffering with intermittent fever, would buy a cheap quinine in preference to a high-priced one, if he knew that he would be obliged to take a teaspoonful of the former for every grain of the latter. The retail sale, which is the end and object of all previous trade-sales, is always a fraud. The wholesale dealer knows this perfectly well, and is, therefore, a party to the transaction, when he deals in articles which he knows to be destined for that purpose. Keeping and selling medicinal substances, therefore, knowing them to be adulterated, under the pretence of supplying customers who wish a cheap article, is but little, if any, less injurious and disreputable than actually making the adulteration or retailing the spurious drugs.

We have been led to make the foregoing remarks because it seemed to us that the profession in this country had been lulled into a kind of false security with regard to this subject, and to the amount of protection afforded them by the existing laws.

Dr. Hassall's book possesses a still more general interest from the fact that it treats extensively of the adulterations in food as well as those in medicine. Indeed, the greater part of the book is occupied by the former topic. The author shows that in England at the present day the most important articles of food and drink are hardly less adulterated than medicines. Some of these adulterations are practised abroad, some of them at home; some on foreign and some on domestic articles. In some cases the genuine and spurious materials are both imported from abroad, and mixed after being brought into the country. Dr. H's statements have the greater value since they are not merely the result of general

inquiries among manufacturers and dealers, but of direct examination of samples purchased at retail, and consequently in the same condition as they are ordinarily obtained by the consumer.

An extremely important feature of the work is the extensive application of the *microscope* to the detection of foreign matters in alimentary or medicinal substances. Many adulterations have heretofore escaped detection in consequence of the inability of the chemist to recognize them by any means at his command. Some adulterations are so coarse that they may be recognized, by any one familiar with the appearance of the genuine article, by a careful ocular inspection; as where foreign leaves are mixed with those of a tea or senna. In other instances, where inspection would fail, a chemical examination is sufficient; as where calomel is adulterated with substances which are not volatilized by heat, or which are soluble in water. There are other cases, however, principally those of powdered vegetable or animal substances, in which ocular inspection and chemistry are equally at fault; as ground coffee, for instance, adulterated with chiccory or exhausted tan, or mustard adulterated with wheat flour and turmeric. Here, however, the microscope steps in and accomplishes all that could be desired; for no amount of grinding and powdering can destroy the shape of the vegetable cells and fibres, or the optical characters of starch-granules peculiar to different kinds of vegetable substances. Thus the minute anatomical structure of all the different kinds of flour is readily recognized when these are mingled together. Chiccory is detected in coffee, potato flour in arrow-root, and the fibres of rasped wood in powdered opium. We know of no application of the microscope, yet made, which has been more directly and practically serviceable than this.

Tea is adulterated, according to Dr. H.'s investigations, with various foreign leaves, such as those of the beech, elm, horsechestnut, plane, willow, poplar, hawthorn, and sloe. Two or three kinds of foreign leaves are mixed with the tea by the Chinese themselves, previous to exportation. The Chinese manufacture also a spurious article for the purpose of admixture with genuine varieties, which they designate by the expressive name of "lie tea." It consists of the dust of tea-leaves, sometimes of foreign leaves, and sand, made up by means of starch or gum into little masses, which are afterwards painted and colored so as to resemble either black or green gunpowder. "This article," says Hassall, "although the chests containing it are branded with the words 'lie tea,' was at a recent period extensively imported into this country, and of course found purchasers."

But it is in the coloring and dressing of the real tea-leaves that the most important, because the most extensive and deleterious, adulteration is practised. Tea drinkers will probably be surprised to learn that with every cup of green tea they swallow so much

mineral paint, artificially put on in order to increase the brilliancy and lustre of the leaves.

"It is with green tea," says Dr. H., "that the practice of artificially colouring the leaves is carried to the greatest extent. The varieties of green tea imported into this country from China are Twankay, Hyson-skin, Young Hyson, Hyson, Imperial, and Gunpowder. Now the colour of the whole of these teas, without a single exception, is artificial, and caused by the adhesion to the leaves of various colouring matters.

"The usual colouring matters employed are ferrocyanide of iron or Prussian blue, turmeric, and China clay. These are mixed in various proportions, so as to produce different shades of blue and green; the surface of the leaves being moistened, they are then agitated with the mixtures until they become faced or glazed, as it is termed. Occasionally other substances are employed by the Chinese, as indigo and sulphate of lime, or gypsum. In proof that it has long been the practice frequently to colour green tea artificially, we have the evidence of various travellers; but the most conclusive and complete evidence, both as to the extent of the practice and the nature of the ingredients used, has been supplied by the microscope."

In these cases, then, the consumer gets green tea, and various colouring matters in addition. But in other instances he gets the colouring matters alone. One branch of the adulterating business in England consists in buying up tea-leaves which *have been already used and exhausted*, drying them, colouring them artificially, adding sulphate of iron or catechu to restore the astringency, and re-selling them as black or green tea. The colouring matters employed for this purpose Dr. H. found to be frequently more injurious than those used by the Chinese; viz., rose pink, Dutch pink, chromate of lead, Venetian red, soapstone or French chalk, carbonate of lime, carbonate of magnesia, carbonate of copper, *arsenite of copper*, Prussian blue, and indigo.

Coffee is adulterated with chicory, roasted flour, scorched peas and beans, roasted carrots, mangel-wurzel, acorns, mahogany sawdust, burnt sugar, Venetian red, and *baked livers*. This last article is one so little likely to be suspected beforehand, that we give a short description of the process, quoted by our author from a work on coffee, published four or five years since.

"In various parts of the metropolis, but more especially in the east, are to be found liver bakers. These men take the livers of oxen and horses, bake them, and grind them into a powder, which they sell to the low-priced coffee shop-keepers, at from 4d. to 6d. a pound, horse's liver coffee bearing the highest price. It may be known by allowing the coffee to stand until cold, when a thick pellicle of skin will be found upon the top. It goes further than coffee, and is generally mixed with coffee, and other vegetable imitations of coffee."

Why baked livers should be especially selected for this purpose does not at first sight appear. It is evident enough, however, as soon as we have become a little familiar with the "fundamental

principles" of adulteration. Horses' and bullocks' livers are, in the first place, cheap. Secondly, the biliary matters with which they are imbibed serve to imitate tolerably well the colour and bitterness of real coffee. They are therefore much better adapted for this purpose than other internal organs, such as the spleen, kidneys, or brains. Coffee, again, which has been largely adulterated with scorched flour or beans, has its colour and bitterness partly restored by the addition of burnt sugar.

We subjoin, as a curiosity in its way, the following, from page 119:—

Results of the microscopic examination of thirty-four different Coffees, of all qualities and prices, and sold under the following attractive titles :

COFFEES OF HIGH PRICE.

1. *Finest Mocha Coffee.* No adulteration.
2. *Noted Old Mocha.* No adulteration.
3. *Finest Jamaica Coffee.* No adulteration.
4. *Rich Old Mocha.* Of chiccory, a good deal.
5. *Best Old Mocha.* A little chiccory.
6. *Fine Old Turkey Coffee.* Much chiccory.
7. *Very Fine Mocha.* Much chiccory.
8. *Genuine Old Mocha.* A little chiccory.
9. *Finest Turkey Coffee.* Contains chiccory.
10. *Celebrated Old Mocha.* A good deal of chiccory.

COFFEES OF MEDIUM PRICE.

11. *Costa Rica Coffee.* Nearly one-half chiccory.
12. *Fine Jamaica Coffee.* Contains a considerable quantity of roasted corn.
13. *Delicious Coffee.* Roasted beans and chiccory, forming about one-third of the article.
14. *Plantation Coffee.* Of roasted corn much, with some chiccory, both not less than one-third.
15. *Finest Turkey Coffee.* Much chiccory, and some roasted corn; very little coffee.
16. *Celebrated Jamaica.* Very little coffee; principally chiccory.
17. *Finest Barbice Coffee.* About one-half coffee, much chiccory, and some wheat.
18. *Splendid Turkey Coffee.* About one-half coffee, the rest chiccory.
19. *Fine Plantation Coffee.* One-third coffee, the rest chiccory, with a little roasted corn.
20. *Beautiful Jamaica Coffee.* Two-thirds coffee, the rest chiccory, with a little corn.
21. *Finest Java Coffee.* Half coffee, much roasted corn, with a little chiccory.
22. *Superior Plantation Coffee.* Three-fourths coffee, the remaining chiccory.

COFFEES OF LOW PRICE.

23. *Fine Mountain Coffee.* Four-fifths coffee, one-fifth chiccory.
24. *Parisian Coffee.* Principally chiccory and corn; very little coffee.

25. *Superb Coffee.* The principal part corn and chiccory; very little coffee.

26. *Rick Drinking Coffee.* One-third coffee, the rest chiccory, with some roasted corn.

27. *Very Excellent Coffee.* One-half coffee, the other mostly chiccory.

28. *Delicious Family Coffee.* One-fourth coffee, three-fourths chiccory.

29. *Fine Ceylon Coffee.* Very little coffee, a great deal of chiccory, some roasted corn.

30. *Fine Java Coffee.* Much chiccory and some roasted potato; very little coffee.

31. *Coffee as in France.* Principally chiccory.

32. *Very Excellent Coffee.* Principally chiccory.

33. *Fine Plantation Coffee.* Nearly all chiccory; very little coffee.

34. *Delicious Drinking Coffee.* A large quantity of chiccory, and much roasted corn.

Cocoa, sugar, honey, milk, flour, butter, lard, arrowroot, and their adulterations, are all described in a similar manner. With many new and unsuspected adulterations, discovered by Dr. Hassall, there are some, popularly supposed to be very common, which he shows to be either quite rare, or even not to have an existence. Thus sugar is generally thought to be extensively adulterated with sand; but Dr. H. found no sand in over one hundred samples of sugar which he subjected to examination. The impurities which he met with were starch, treacle, glucose, fragments of sugar-cane, fungous sporules, and specimens of the *acarus sacchari*. Milk, again, very seldom contains chalk, contrary to the general belief. Dr. H. did not meet with it in a single instance. The most prevalent and important adulteration of milk is with water; after which the operator adds molasses or syrup to sweeten it, salt to give it a flavor, and anatto to color it. Starch and sheep's brains are sometimes added, in order to restore the opacity to diluted milk; but these adulterations are rare, the dealers not usually taking the trouble to practise them. These impurities would furthermore, like chalk, be at once detected, on allowing the milk to stand, by subsiding to the bottom of the vessel as a visible deposit.

A very amusing chapter is that on what the author calls "proprietary alimentary preparations; that is, various mixtures which are prepared of cheap ingredients, patented, and then sold at a dear rate under some high sounding title; such as Revelenta Arabica, Nutritious Farina, Semola, Semolina, and the like. These substances consist mostly of baked flour, or even of cheaper ingredients, sometimes scented and coloured, and sold at prices varying from twenty-five to sixty-eight cents per pound; their real value according to their composition, not exceeding in any case five or six cents per pound. Thus the author gives analyses and microscopic drawings of the following of these articles among others:

Dubarry's Revalenta Arabica; consisting of starch-granules of the Arabian lentil, barley flour, sugar, and salt.

Wharton's Ervalenta; consisting of a mixture of the French or German lentil with a substance resembling maize or Indian corn meal.

Gardiner's Alimentary Preparation; consisting of very finely ground rice.

Leath's Alimentary Farina, or Homœopathic Farinaceous Food; consisting principally of wheat flour, slightly baked, sweetened with sugar, together with potato starch, Indian corn meal, and tapioca.

Bullock's Semola; consisting of the gluten of wheat, with a proportion of wheat starch.

Maidman's Nutritious Farina; consisting entirely of potato flour, artificially coloured of a pink or rosy hue.

Plumbe's Improved Farinaceous Food; composed of bean or pea flour, some potato flour and a little arrowroot.

Pulmer's Vitaroborant; consisting of a mixture, sweetened with sugar, of wheat flour with the red or Arabian lentil.

The flour, sugar, &c., were introduced, in many of these preparations, merely to diminish the strong flavor of the lentils, which is sometimes disagreeable.

"Extremes meet," says the author; "lentils, being somewhat cheaper than peas, are supplied to many of our workhouses, to be used in the preparation of soup, &c. Thus they are not only consumed by paupers, but by the rich, the chief difference being that the latter frequently pay 2s. 9d. per pound for them."

Dr. H. suggests also one or two receipts for preparing similar mixtures, which shall have all the advantages of the patented articles, if any such there be, without their exorbitant price.

"As the cost of most of the prepared lentil powders sold as ervalenta, revalenta, &c.—viz., 2s. 9d. per pound—forms a very serious obstacle to their use, supposing that it is in any respect desirable that they should be more generally consumed, we have framed the two following receipts, whereby a considerable saving of expense may be effected:—

1st Receipt.

Red or Arabian lentil flour,	-	-	2 lbs.
Barley flour,	-	-	1 lb.
Salt,	-	-	3 oz.

Mix into a uniform powder.

"The red lentil may be obtained of almost every corn chandler at about 4d. per quart; the cost of our ervalenta would be about 2d. per pound; and it is perfectly clear from the analyses which we have given above, that whatever may be the advantages possessed by the much vaunted ervalentas, revalentas, &c., that our article must contain them all."

2nd Receipt.

Pea flour, -	-	-	-	-	2 lbs.
Indian corn flour,	-	.	-	-	1 lb.
Salt,	-	-	-	-	3 oz.

Mix as before.

Increase of bulk is not the only object for which adulterations are practised. We have already seen that, in the case of teas, foreign and sometimes poisonous substances are added merely for the sake of improving the colour and external appearance of the article. This is still more remarkable in the case of *pickles*. These articles of food are almost universally more or less artificially coloured, and generally with some preparation of copper. This adulteration is sometimes so excessive as to be readily detected, even by the eye. Every one must have noticed samples of pickles kept for sale by the grocer, in which the green colour was unnaturally strong; the preserved pickles being often, in fact, greener than the same vegetables when in a fresh condition. This green colour has even sometimes a distinct and altogether unnatural shade of blue. Now, in all these instances, the colour depends upon the presence of some salt of copper; either the sulphate (blue stone) artificially added, or the acetate produced by the action of the vinegar on metallic copper. When metallic copper is used, the sulphate is frequently formed as well as the acetate, owing to the previous adulteration of the vinegar with sulphuric acid.

The examination of twenty-three samples of pickled vegetables led Dr. H. to the following conclusions:—

1. That the vinegar used for pickling is of a very weak description, the percentage of acetic acid ranging between 1.48 and 2.91. It will be remembered that vinegar of good quality ought to contain from four to five per cent. of pure acetic acid.

2. That nineteen out of twenty of the vinegars submitted to analyses, poor as they were, yet owed a portion of their acidity to sulphuric acid, the amount of which varied in the different samples from .38 to 2.52 in the 1000 grains; the largest quantity of this acid being detected in the vinegars in which the red cabbages were pickled.

3. That in the whole of the sixteen different pickles analyzed for copper, that poisonous metal was discovered in various amounts; two of the samples contained a small quantity; eight, rather much; one, a considerable quantity; three, a very considerable quantity; in one, copper was present, in highly deleterious amount; and in two, in poisonous amounts.

4. That the pickles which contained the largest quantity of copper were those which consisted entirely of green vegetables, as ghirkins and beans.

The author presents a most repulsive picture of the composition of *potted meats and fish*, as subjected to his examination. These articles are but little used in this country, but in England they

are extensively employed and are generally regarded as a delicacy. The form of a homogeneous paste is, however, that which presents the greatest facility for adulteration; and these preparations are accordingly found to contain not only such ingredients as flour and starch, and to be partly made up of inferior qualities of meat and fish, but to be artificially coloured also, in most instances, with Venetian red or Armenian bole. These earthy substances are added, according to Dr. H., not only for the purpose of heightening the colour of the mixture, but also to conceal the dirt contained in the brine, in which the fish is imported.

The artificial colouring of *sugar confectionary* is much worse than the above. These articles are sometimes coloured all over with the same tint; and are sometimes parti-coloured, two or three different tints being applied, for the sake of ornament, to different parts of the same piece. From the examination of 141 samples, Dr. Hassall arrived at the following result:

Fifty-nine were coloured with CHROMATE OF LEAD.

Eleven with GAMBOGE.

Twelve with RED OXIDE OF LEAD.

Six with BISULPHURET OF MERCURY (vermilion).

Eight with BROWN FERRUGINOUS EARTHS, Vandyke brown, umber, or Sienna.

One with INDIGO.

Twenty-four with PRUSSIAN BLUE.

Ten with a mixture of CHROMATE OF LEAD and PRUSSIAN BLUE, making several varieties of green.

One with CARBONATE OF COPPER.

Nine with ARSENITE OF COPPER.

Four with CARBONATE OF LEAD.

Enough has been said to show the great extent of the above adulterations, and the abominable consequences that are liable to result from them. It must be recollected that many of these substances, fraudulently introduced into food, are actually poisonous; and, furthermore, that some of them belong to the class known as cumulative poisons. The small quantities in which these substances are introduced, day by day, is therefore no protection against their finally producing poisonous effects. Whoever takes Cayenne pepper every day upon his salad, is liable to be dosing himself at the same time with red oxide of lead; and the lover of green tea may after a time find his eyelids swelling and his legs aching from the arsenite of copper with which the leaves were coloured. Lest it should be supposed that such dangers as these are altogether imaginary, we subjoin the following account of a case in which lead palsy was produced by taking snuff: an article which is not unfrequently coloured with chromate of lead, or the red oxide of the same metal. The case is given on no less authority than that of Mr. Erichsen; and it is of so remarkable and interest-

ing a character, that we extract it entire. It is from page 617, of Dr. Hassall's book,—

"Case of slow poisoning by Snuff containing Lead. By Mr. ERICHSEN. Whilst on a professional visit in the country, last March, I was requested to see a gentleman who had been invited down to a friend's country-seat, in the hopes that change of scene and air would influence favourably an attack of paralysis, which was said to be of a rheumatic character, by which he had been disabled from work for many months past, and of which he despaired of recovering, having relinquished all treatment.

"I found the patient in bed, and somewhat exhausted by the journey down, a distance of nearly a hundred miles from his usual residence. He was peculiarly sallow, the complexion having almost an icteric tinge; but the countenance was lively and expressive, and the intellect as bright as usual.

"Mr. A. B. could stand, and, if supported, could walk, though feebly and with much difficulty. He complained much of pain about the shoulders and the fleshy parts of the thighs and legs, and especially of burning sensations in the soles of his feet. The articulations all appeared healthy; no swelling or looseness was perceptible about any of them.

"I was, however, particularly struck with the appearance of the hands and arms, which were lying powerless on the coverlid of the bed. There was marked 'wrist-drop' of both arms, the hands hanging flaccid and at right angles with the forearms, without the patient being able to extend or raise them in the slightest degree. There was, however, some slight power of extension left in the fingers, especially in those of the left hand. Though unable to extend the fingers, raise the hand, and scarcely having power to elevate the arm, Mr. B. could *flex* the fingers pretty firmly, so as to give a tolerably good grasp to whatever was put into his hand. The index finger of the right hand seemed to be the most affected, and was permanently flexed.

"There was a very marked degree of wasting of the whole mass of the extensor muscles of the forearm, so that a longitudinal hollow corresponding to the interosseous space was perceptible down the whole length of the forearm, and a very deep and marked depression in the interspace between the first and second metacarpal bones. The hands were quite powerless, and the patient was unable to render himself the slightest assistance.

"The tongue was pale and flabby; and on examining the gums, I found a deep blue-black or leaden-coloured line around the teeth, more marked about the molars. Digestion was much impaired. Appetite capricious, with much flatulence, and occasional attacks of constipation, with colicky pains.

"On inquiring into the history of the case, I learnt that Mr. A. B., who is much devoted to literary pursuits, and habitually led a sedentary life, had for some years previously suffered from pains of a rheumatic or gouty character; that in May, 1853, he had been attacked by constipation and colic while lodging for a short time in a newly-painted house. In August of the same year he had first begun to lose power in extending his arms, finding a difficulty in raising them to put on his coat; and from this time the paralytic symptoms gradually increased, until they had assumed the degree in which I found them, when he had become reduced to a state of

complete physical helplessness; though, as I have already observed, his powerful and clear intellect was as perfect as ever.

"On examining Mr. A. B., I was at once struck by the very marked 'wrist-drop,' more complete than I had ever seen before; the limitation of the paralysis to the extensors, which were greatly wasted; the existence of a blue line around the teeth; and the occurrence of occasional attacks of constipation and colic, together with flying pains in the fleshy parts of the body, with absence of all articular inflammation. These symptoms led me to the conclusion that Mr. A. B. was suffering from saturnine paralysis, and that he had been slowly poisoned by lead.

"The difficulty was, however, to ascertain how poisoning by lead could have been effected. With this view, I made diligent inquiry into the patient's habits, the water he drank, the utensils he used, &c., but could not detect any source to which the presence of the mineral in the system could be traced, except that the first attack of colic and constipation had occurred whilst temporarily lodging in a house which smelt of fresh paint; but as he soon left this, I thought it very insufficient to explain his continued and increasing sufferings. In the course of my inquiries, however, I found that he took snuff in considerable quantities; I accordingly emptied his box of its contents, and took them up to town with me with a view to further examination. The snuff was analyzed by Professor Williamson, who detected in it a considerable quantity of lead; and another supply having been procured from the shop at which Mr. A. B. was in the habit of purchasing it, was subjected to analysis by Dr. Garrod, who readily detected large quantities of the metal in it.

"Mr. A. B. was now put under treatment for saturnine paralysis. The snuff was left off; the bowels were kept open with the acidulated sulphate of magnesia; iodide of potassium was freely given in conjunction with strychnia, which was applied topically to blistered surfaces as well as administered by the hands; and galvanism was assiduously employed. Under this plan of treatment he gradually improved in all respects; the colicky symptoms rapidly disappeared, the muscular pains subsided, and the paralytic condition of the extensors was gradually removed, until at the end of July he was able to resume and to discharge public duties of a very onerous character with his usual ability and energy.

"With the above sketch we received from Mr. Erichsen a sample of the snuff which was the occasion of all the mischief. On analysis it was found to contain 1.2 per cent. of red oxide of lead; that is very much less than some of the other samples, the analyses of which have already been given."

The author goes through, in a similar manner, with the description of vinegar, spices, cheese, ale, porter, spirits, wines, &c., and their adulterations. We will not, however, dwell further on the very interesting details which he presents, but refer the reader for them to the book itself.

In conclusion, we would offer some remarks on the adulteration of food and medicine in our own country, and the means of protecting ourselves from it, for which we believe the reader is already prepared. It is plain that the adulteration of food is a serious injury, not to the purse only, but to the health of the consumer. That of medicine is certainly not less deleterious. It is always

fraudulent and may at any time become even homicidal in its consequences. By its operation all the devotion, skill, and judgment of the practical physician are set at naught. A patient has perhaps swallowed, intentionally or by accident, an overdose of laudanum. The physician who is called finds him already half comatose; and he knows that ipecac and tartarized antimony are too slow in their operation to be trusted as emetics. Sulphate of zinc is not at hand; and if it were, half of it would, perhaps, consist of Epsom salts. But there is mustard; nearly always to be found ready in every family, the most active, prompt, and local in its operation of all emetics, and the most stimulating to a semi-narcotized stomach. He mixes a liberal dose, succeeds by dint of perseverance in compelling the patient to swallow it, and awaits the result. But, unfortunately, the mustard was partly clay, partly plaster of Paris, and partly turmeric, with a little mustard and red pepper to give it pungency. No vomiting follows. Another dose is forced down, with greater difficulty than before, with a similar ineffectual result; and by the time the assistant arrives with a stomach-pump, the patient's blood is loaded with the narcotic, and he is fairly beyond the reach of help from either medicine or surgery.

Take another instance. A physician wishes to give an emetic to a slender and delicate child, who has eaten the wrong thing at dinner and is sick in consequence. Sulphate of zinc or copper would be evidently unnecessary and inappropriate. Tartarized antimony especially is to be avoided, on account of its depressing effects and the persistence of its operation. Ipecac, mild and effectual as an emetic, without any violent depressing constitutional effects—is the drug which he judiciously selects. But his judgment is without avail; for the ten grains of ipecac administered to the little patient contain eight grains of liquorice and one of tartarized antimony.

Now, let it be remembered that such cases as these are liable to occur at any moment in the practice of any physician. Similar instances, where the immediate effects are not quite so disastrous, evidently do occur daily, and do not require to be especially designated. In view, therefore, of the moral character, the intention and the consequences of these adulterations, there can be but one conviction as to the necessity of legislative interference, and the manner in which it should be exercised. *The adulteration of food or medicine should be made a felony; and should be placed upon the same level with the coining of false money, and the counterfeiting of bank notes.* The dealer who vends a spurious article, knowing its character, would then be placed in the position of one who passes a counterfeit bill, knowing it to be counterfeit. The consumer would then have every reasonable protection. The honest trader would not be compelled, in self-defence, to adopt the practices of the unscrupulous, or at least to wink at their existence, as he does

at present; and, finally, the practical operation of medicines would no longer disappoint the physician and discourage the patient, as they too often do at the present day. It is to be hoped that both the National Association and the local societies will continue to agitate the question, until they succeed in bringing it properly under the notice of the State legislature. J. C. DALTON.

[*Am. Jour. of Med. Sciences.*]

On Mercury in Typhoid Fever. By Dr. WARE. (A Paper read before the Abbeville District Medical Society.)

There is probably no question more interesting to the medical practitioner of our district, or more practically important, than that which relates to the propriety of using mercury in the treatment of typhoid fever. We are every year becoming more painfully familiar with the ravages of this mysterious, this obstinate form of disease, and yet the opinions entertained as to its pathology are almost as unsettled as ever, and the treatment of it as empirical as when it first visited our latitude. True, we have witnessed, time and again, all the symptoms that manifest themselves during the progress of the disease, in all the various forms that it assumes, and we can unhesitatingly trace these symptoms to the different tissues, of the disordered states of which they are significant. We are fully acquainted, too, with all the morbid appearances, all the appreciable lesions revealed by *post-mortem* dissections, and still we are forced to admit, that our positive knowledge stops short at secondary links in the chain of causes; that we are yet ignorant of the real nature of the primary impression or lesion, from which results the pathological conditions manifested by the phenomena developed during the progress of the disease, and which causes these pathological conditions to resist the influence of remedies usually found efficient to overcome diseased states occurring in other forms of fever, but affecting the same organs and tissues, and giving rise to the same, or apparently the same train of symptoms. Often are we forced to watch a case, week after week, unable to check its progress, trying first one plan of treatment and then another, without seeing any decidedly beneficial effect from any; and in the end we are totally unprepared to say, if the case terminates fatally, whether death was the result of the disease or of the means used to subdue it; or, if the patient recover, whether or not any thing we did, contributed to his cure. Such is the uncertain state of our knowledge, such the humiliating admissions which honesty forces us to make; and it becomes us to examine rigidly and candidly every plan of treatment proposed, and to submit every remedy to the test of a most scrutinizing investigation, before admitting its claims.

Typhoid fever is, according to the best evidences of its true pathology, essentially a disease of irritation, and this irritation, whatever part, tissue or organ, may be its primary seat, results in general irritability of the system, or in some local inflammation, or both; and all are agreed as to the grand, leading indication, viz., to subdue irritation, and support the system under its wasting influence. It is our object to prove, that this, the most important indication, and the one to which all others are but secondary, can not be met by the use of mercury, and that such use is not only unphilosophical, but hazardous: unphilosophical, because it constitutes an attempt to remove a cause by relieving an effect; and hazardous, because it involves an expenditure of vital energy under which the patient may sink, and which can, under no circumstances, contribute to his cure.

Settled opinions, it has been well said, are difficult outposts to carry, though nature herself be battering at the walls; and the tenacity with which many cling to the mercurial treatment, fully exemplifies the truth of the assertion. Accustomed to see all evidences of the disordered states of the digestive organs, as occurring in fevers of miasmatic origin, yield to the influence of mercury, it was not at all surprising to find physicians slow to acknowledge the utter inefficacy of this drug, when used in the treatment of a disease having so many symptoms in common with that one, in which it is wont to exhibit the most beautiful display of its powers. We may have, during the progress of a case of remittent miasmatic fever, a congestion or inflammation of the liver, a torpor or an excessive action of this organ, and any or all of these conditions may be relieved by the judicious administration of calomel. In typhoid fever, the liver becomes congested and inactive, and mercury fails to remove the disorder. Remittent fever, it is admitted on all hands, has its proximate cause in a nervous centre, and with equal unanimity it is agreed that typhoid fever has its primary seat in *some* portion of the nervous system. Then, why these different results from the same course of treatment, when instituted in two diseases having their proximate causes in the same system of organs, and whose more remote consequences, as displayed in their effects upon the liver and its functions, are apparently the same? May we not, upon true inductive principles, answer, that the two diseases are, in their nature, essentially different, that they are generated by circumstances and agencies totally dissimilar, and that they commence their attacks by making impressions having no *real* analogy? And may we not, with equal propriety, contend, that, in reference to the liver, in the one case, the disorder is the result of causes overpowering the *existing* energies of that organ; in the other, of such as diminish the native force of those energies? That in the one case, functional derangement is the result of increased action; in the other, of diminished vitality. In remittent fever, the action

of the liver is disordered or suspended, because the channels through which it acts are obstructed, its machinery clogged: in typhoid fever, this viscus exhibits evidences of imperfect or disordered action, as a result of the diminution of its motor power; and this diminution is caused, not by continued resistance to the *exercise* of that power, but by the failure of its source. Hence it is that mercurial purgation, in remittent fever, increases the strength of the patient, and contributes to his comfort, by relieving the surcharged vessels of the portal system, and thus allowing the liver the free exercise of its powers, which had been held in check, not obstructed; whilst the same agency, in typhoid fever, increases debility and aggravates existing symptoms, by worrying an organ rendered incapable of being aroused to healthful action, in consequence of its diminished supply of nervous influence.

Again, diarrhœa frequently occurs as a complication of remittent fever, and no symptom is more frequently present in typhoid. And yet, how different the diseased states upon which depend the symptom, as they occur in these two forms of fever, and how strikingly different the means required for the relief of each. The same organs are affected in both instances, but, if I may be allowed the expression, from different directions. In remittent fever, the diarrhœa occurs in consequence of engorgement of the liver, inducing a congestion in the vessels ramifying upon the mucous lining of the intestines, or from the presence of acrid secretions, or of indigestible substances, or from all these causes combined; and we have, accompanying the profuse alvine discharges, a furred tongue with red edges, (probably dry,) and a tumefied condition of the abdomen, with great tenderness on pressure. The tumefaction of the abdomen is removed, and its tenderness relieved, by blistering its surface, and under the continued use of calomel and opiates, the diarrhœa is checked, and the discharges gradually assume a healthy appearance. Here, too, the cause of deranged action is distant from the source of power, and coming within the reach of calomel, the organs are restored to the proper exercise of their functions. But in typhoid fever, the diarrhœa is the result of a diseased condition of the mucous follicles of the intestines; which diseased condition is induced by the failure of healthful innervation, entirely independent of the portal engorgement, vitiated secretions, or indigestible matter; and though we have, as before, a tympanitic condition of the abdomen, yet there is very little tenderness upon pressure, a blister fails to relieve, and the administration of calomel is not followed by a change in the character of the discharges, approaching more and more nearly to the healthy standard, because the seat of the difficulty is beyond the reach of this medicine, and located in a system of organs over which it exerts no *direct* controlling influence. True, if opium be combined with calomel in such quantities as to prevent its acting upon the bowels *at all*, the first discharges that occur may be

consistent, and they will probably, exhibit some trace of biliary secretion; but, if allowed to continue, they invariably become watery again, and the scanty admixture of bile gives to them a dirty, dingy, brick-dust color, strikingly different from that appearance so characteristic of stools induced by the specific action of mercury. Nor is the patient at all benefitted by this purgation, but on the contrary, he is invariably left in a more debilitated condition, and frequently with all his symptoms manifestly aggravated. Another consideration, too, renders this practice eminently unsafe; for the calomel, if used at all, must necessarily be given in small and repeated portions, and combined with an opiate: thus ptyalism may be induced, and if this occur, *cancrum oris* will be likely to supervene, in consequence of the putrescent condition of the fluids, always present in typhoid fever. If this be true, (and a painful experience convinces me that it is,) is not the use of mercury, as a means of relieving the disordered condition of the bowels generally incident to this disease, both unphilosophical and hazardous? And if the views that we have expressed as to the difference in the pathological conditions, upon which depend the symptoms that we have investigated, and which occur both in miasmatic and typhoid fevers, be correct, there is, certainly, no analogy between the two forms of disease, and any plan of treatment predicated upon the supposed existence of such analogy, is in violation of the plainest principles of medical philosophy.

But the impropriety of the use of mercurials is not only proved positively, by the fact, that the pathology of the disease under consideration is essentially different from that of the disease in which mercurials manifest their happiest effects, but also, by implication, from the efficacy of remedies of a totally different nature, viz., stimulants and anodynes. These allay irritation, check diarrhoea, subdue delirium, overcome watchfulness, promote sleep, equalize temperature, support the powers of life, prevent the disease from expending its force upon any one vital organ, and, in a vast majority of cases when judiciously administered, conduct it to a favorable termination. And if in the assemblage of symptoms, constituting typhoid fever, these desirable results can be accomplished by the use of mercury, its properties are much more varied than we have been accustomed to regard them, and after all the time and study that have been devoted to the investigation of its physiological effects and uses, we are still unprepared to assign it its proper place in the classification of the *materia medica*.

[*Transactions South Carolina Med. Association.*

On the Nature and Treatment of Inflammation and Abscess, and the Modern Doctrines on that subject. By F. C. SKEY, F.R.S., F.R.C.S., Surgeon to St. Bartholomew's Hospital, etc., etc.

GENTLEMEN,—It was my intention to day (July 13, 1857,) to lecture on "Abscess," acute and chronic, a most practical subject. One cannot occupy the mind with the consideration of the nature of abscess without reverting to its origin or cause, and this leads me to the wide study of "Inflammation." Now, you will find the subject of inflammation so misinterpreted and misunderstood in books, and in the wards, that I cannot give you any reason for the "faith that is in me" as to the nature and treatment of abscess, without first saying that I entertain some very peculiar opinions, more especially as to the results of inflammation in surgical cases, and the general treatment to be adopted. Microscopic inquirers on inflammation are too theoretic for my taste. When a young man is asked in his university examination, what is inflammation? he answers something out of books that he scarcely understands, though it may be the most recent and orthodox idea on the subject. Perverted nutrition! Inflammation is perverted nutrition. A student says that's an answer, and he understands it; but to my mind, there is really no clear idea attachable to it. How will the cabalistic words "perverted nutrition" help you in an obscure case, say of abscess in the pelvis, or in the inner ear, or the skull? I advise you to go more practically to work. Did not Galen tell us inflammation is a state of vessels attended with pain, heat, swelling, and redness? Depend upon it, that in clinical practice, it is better to adhere to Galen, for believe me, though "perverted nutrition" may be more scientific and less old fashioned, it is also less intelligible. I hold that, wherever you have inflammation you have a condition of the vascular system attended with pain, swelling, heat, and redness; and, I hold also, that where you have not pain, swelling, heat or redness, that there you have something else, other than inflammation. There is a great number of modern books on this subject, but I am inclined to pass them over at present. Half a century ago, Dr. Thompson published an admirable book on inflammation, but even this work has carried away the mind of the profession rather too much from the good common sense of Galen. What is the crisis of inflammation? Why it is that point where inflammation stops. Mr. Joseph Henry Green has gone over this very well; read what he says. Thompson says the tendencies of inflammation are towards effusion, suppuration, ulcer, gangrene, cicatrization, resolution, adhesion. There are seven of them, according to Dr. Thompson, but crisis and resolution are one, and I hold very firmly that these seven may be reduced, perhaps, to two, gangrene and deliquescence.

Well, what is chronic inflammation? A word in the mouth of

every doctor. There is no such condition at all. What is suppuration? What is abscess? Local inflammation, the surface softens, matter forms, and you have in an eminent degree pain, heat, redness, and swelling. Now, chronic inflammation and local inflammation are entirely different things. What is ulceration? Here the theorists meet you again; disintegration of molecules! That's fine, is it not? But what of pain, heat, redness, swelling? Certainly if they are essential to inflammation you can have ulcers without them; so that ulcer is not a result of inflammation, or rather inflammation is not a *sine quâ non* of ulcer; you will have ulcers from starvation. I hold that the two essential results of inflammation are, gangrene or deliquescence. Take this idea with you through the wards, and see if I am not right.

Adhesion of opposite sides of pleura, how is that effected? Is there heat, redness, pain, and swelling? Certainly not. If I do a rhinoplastic operation, is that attended by local inflammation? I think not. I know very well that this is the way all such processes are explained; but it is an explanation which explains nothing. Then effusion,—a condition as in hydrocele, attended by a pouring out of water. Surely there you have no pain, heat, redness, swelling. To my mind it is simple nonsense to call this inflammation, or the effusion of fluid in the pleura or pericardium, in debilitated subjects.

Cicatrization, the last of the lot, is the same; it is not inflammation, there is no word so prostituted in fact as this convenient term of inflammation. These views of Dr. Thompson are unpractical, and it is absurd to apply local depletion to vessels already weakened and showing want of tone. I say to you go back to Galen, and adhere to his definition,—imprint it on your memory. Heat, pain, redness, swelling, where you find these you find inflammation. Chronic abscess! What a large subject that is; and psoas abscess in half-starved scrofulous children! But if you remember what I am saying, it is easily explicable. I often think if the term "inflammation" were restricted to one-tenth of the cases that it is, we should go nearer to the truth of nature, and I am sure we should gain more credit with our patients. Inflammation to us surgically, is sometimes an unhealthy state originated for a healthy object. If you had a thorn in the skin, inflammation is set up to get rid of the thorn. But can you apply that process to the repair of a broken bone? I say you cannot; they are quite different processes. Now as to treatment. I believe in seven cases out of ten depletion does harm. There is nothing more common than to apply leeches to arrest or check inflammation or abscess. I will take an impending mammary abscess in a poor woman suckling. There is nothing, in fact, like leeches or bleeding, for *increasing* the inflammation. Your leech is your true destructive to hasten suppuration.

Mammary abscess occurs in weak women during lactation, weak

women with what we know as "bad" confinements, that is, a tedious labour with much subsequent hæmorrhage, &c. Does not nature herself open your eyes to the fact that there is impaired vital power? Is it not common sense that bark, wine, tonics, meat, and such like, are the proper plan of cure; not purging, leeches, antimony, &c.? I never saw a case of abscess that was not improved by the former plan. It is to me quite deplorable to witness the mischief committed by the depleting system. The whole testimony of the best men in the profession is to give up the lancet. The times of the lancet are gone by; you might as well set up cat-o'-nine-tails and chains in lunatic hospitals. I have the highest regard for the opinion of Sir Benjamin Brodie, and I asked him the other day—Does he not use the lancet less than formerly? What about bleeding *ad deliquium animi*—the venerable old formula when I was a student? The reply of Sir Benjamin Brodie was curious—"I never see a lancet now, I haven't one in my possession." Bleeding is almost unknown amongst our best practitioners. Every abscess you see in hospital is the result of debility, rather than of the phlogistic diathesis. I believe that pus itself is an indication of a condition below par—blood altered into pus. The term congestion is often a better word than inflammation; but we induce the congestion if we weaken the heart as to fever? Do not be misled about that either; many things which we do, *selon les regles*, only keep up fever, inasmuch as they keep up irritation in the system. Bleeding in Typhus fever, starvation, blisters to the head,—these are all wrong, and perhaps only as wrong as the miserable attempt to stop mammary or other abscess by local depletion. I say increase the heart's action, but do not weaken it.

I have great confidence in the old Jesuit's bark and wine; in the out-patient's department you will see it "work wonders," especially when the patient is brought subsequently into hospital. Take those thick deposits of lymph round a bubo; those slow tedious things that come day after day to hospital, you will never cure them by weakening the patient; but first change your hand and try bark and ammonia; or in erysipelas, try bark, and ammonia, and wine, and you'll cure your patient. Let us now recapitulate, and you will then discover the bearing of all this on the cases of abscess we have in the hospital. 1. I object to the doctrine of "perverted nutrition," and wish you to adhere to the more practical definition of Galen, viz., pain, swelling, heat, and redness. 2. As a rule, venesection does harm rather than good in the cases of so-called inflammation, in hospitals. 3. Chronic inflammation is a term that signifies very little, if it be not, in the majority of cases, a term without any significance. 4. Resolution or gangrene are the only results of pain, swelling, heat, redness. Ulceration is the result from congestion. All the others are accidental in their natures, or mere concomitants.—[*Med. Circular.*

Artificial Rupture of the Amniotic Sac during labor. Objections to the practice. By B. F. RICHARDSON, M.D., Adjunct Professor of Obstetrics and Diseases of Women, in the Medical College of Ohio.

Is it desirable to maintain the integrity of the Amniotic Sac during labor? According to some authors, its only purpose during labor is to dilate the os uteri. Others in conjunction with this, consider it capable of protecting the foetus from injurious pressure during uterine contractions. All writers that have been consulted, with the exception of Dewees, suppose it to be the only proper and efficient agent in the accomplishment of dilatation of the os uteri; and that having secured this end (complete dilatation) its further maintenance becomes, at least, a matter of indifference; and those who allude to its protective power over the foetus, seem to have reference alone to those cases wherein the liquor amnii is evacuated prior to a dilated or dilatable condition of the os; for their instructions clearly show, that after complete dilatation, they have no such apprehensions in regard to the child.

Is the Amniotic Sac the only proper and efficient agent in the production of dilatation of the os uteri? Prof. Murphy of London has endeavored by a laboured and ingenious argument to sustain the affirmative of this question. The defect of his argument lies in his having assumed that as fact, which remains to be proven. He asserts that the amniotic sac is a better dilator of the os, than the smooth, round, and comparatively unyielding vertex. His argument is by no means conclusive on this point; for the reason, that to sustain the assertion would require a total disregard of well known hydrostatic and mechanical laws. Again, he assumes as a postulate that until a certain degree of dilatation has occurred, if the vertex, uncovered by the membranes, presses upon the os uteri, it will irritate it and render it rigid and unyielding. This idea is reiterated several times. Terms are sometimes more convenient than convincing. On page 85, London Edit. 1852,) he says: "If, when the liquor amnii escapes, the dilatation be slightly advanced, and the orifice of the uterus increased only an inch or two in diameter, you may expect more or less delay in the completion of this stage, (the first,) unless the cervix of the uterus be extremely thin. If it be at all thick, the irritation of the head, generally, renders it rigid, *no matter how dilatable it may have been previously.*" The italics are our own.

Now, it may be pertinently asked, what is the character of that pathological condition imparted to the structure of the cervix by the pressure of the smooth and usually well lubricated vertex, whereby it becomes rigid and loses its former dilatability? On the other hand, the pressure on the os uteri,—no matter how violent,—by the amniotic sac, however tense, firm and unyielding it may be; is *presumed* to be incapable of producing a like patho-

logical condition. Prof. Murphy stands not alone in the entertainment of these views; and we shall therefore endeavor hereafter to point out the true causes of this *actual* delay in delivery and *apparent* change in the condition of the os uteri, where the waters are evacuated early in the first stage of labor.

Are there any important objections to rupturing the membranes after complete dilatation of the os uteri has taken place? The opinion of writers as to the uses of the amniotic sac during labor, may be clearly derived from their answer to this question. Chailly says, page 229, "*After having ascertained that the dilatation is complete, that the presentation is favorable, and that there is no other mechanical obstruction than the resistance of the membranes,* it becomes the duty of the accoucheur to rupture them." He is here speaking of resistance of the membranes without regard to the efficiency or non-efficiency of the uterine contractions. Again, on same page he says: "I have stated, as a principle, that the membranes should not be ruptured until the dilatation is complete," &c. In regard to the conduct of an ordinary labor Dewees says: "Should the pains be efficient, and the os uteri well dilated, or even easily dilatable, and the membranes entire, let them be ruptured by the pressure of the finger against them, or by cutting them with the nail of the introduced finger." The imputation of Prof. Ramsbotham against Burns, could have been applied to Dewees more justly. Again, in the same paragraph he says: "And this should be done for the following reasons: first, because when the mouth of the uterus is dilated, or even easily dilatable, *the membranes have performed every duty they can perform,*" &c. Denman says: "We will therefore agree in establishing it as a general rule for our conduct, that the membranes should never be ruptured artificially, at least before the os uteri is fully dilated," &c. Burns says, when speaking of the conduct of natural labor: "Even if the membranes be not considerably protruded, if the os uteri be completely dilated, no injury can arise from rupturing them, for they ought, in the natural course of labor, to give way at this time." Gooch says:—"Never rupture the membranes until the os uteri is almost or entirely dilated," &c. Lee says: "If the perineum and os uteri are rigid, and the head is high up, and it is the first child, it is seldom necessary to have recourse to rupturing the membranes before the first stage of labor is nearly or fully completed." Churchill remarks, when treating of natural labor: "When we are quite satisfied that the head has passed through the os uteri, we may rupture the membranes, by pressing the finger against them during a pain, as their integrity is an impediment to the advance of the child after this time; but it should not be done hastily, nor until we are certain that their usefulness is at an end." F. H. Ramsbotham says: "It is desirable in practice to preserve the membranous bag entire as long as possible; or, at least, until it has performed the *whole office* assigned to it by nature,—viz., the dilatation of the os

uteri, the vagina, and somewhat of the external parts." Velpeau remarks that "where the point of the ovum is too slow in giving way, it must be ruptured. To be done *without inconvenience*, this little operation requires the combination of the following conditions: first, that the dilatation shall be, at least, very much advanced, etc." Cazeaux gives similar advice; Blundell likewise. Several of the foregoing authors allude to the advantage derived from the persistence of the amniotic sac where it may become necessary to introduce the hand into the uterine cavity. It will be perceived upon a careful review of these quotations, that their authors believed that in all ordinary labors, when the os uteri is fully dilated, the office of the amniotic sac is entirely fulfilled. In the next number of this journal we shall endeavor to show, that one of its most important uses remains unfulfilled until the presenting part has passed through the superior strait; and that in all natural, uncomplicated labors, especially premipera, the membranes should not be ruptured at any time.—[*Western Lancet*.

An Easy Method of Improving the Digestibility of Milk. By Dr. GUMPRECHT, of Hamburg.

It is well known that cow's milk, which is commonly employed for the diet of newly-weaned children, and also for those who are older, is frequently not well borne, and gives rise to indigestion, acidity, flatulence, colic, diarrhoea, etc. Hence it has been proposed to improve its properties by the addition of water, and sugar of milk. Experience shows that this fulfils but imperfectly the object in view.

Reflecting that food for adults is never prepared without common salt, which not only renders it more palatable but also more digestible, because (as Molescott has well remarked in his *Physiologie der Nahrungsmittel*) salt not only acts as a stimulant to all the glands of the digestive apparatus, increasing their activity, but also renders the albumen (and consequently the casein of the milk) as well as the fat, more soluble in the digestive fluids, I was naturally led to the idea of rendering the milk intended for recently weaned and older children more easily digestible, by the addition of a little salt; and I found that I could in this way prevent the indigestion so often following the drinking of cow's milk, and even remove it when already present.

So far as I know, no author who has treated of the diet of newly-weaned children, has mentioned this useful addition to milk, and it is in fact remarkable that so natural an idea should not have occurred long ago, as to season the milk intended for the nourishment of weaned children with a little salt, to make it more digestible, since milk is often given them mixed with flour, groats, pounded biscuit, etc., which require this wholesome condiment in

order to become more easily digested and assimilated. It gave me, therefore, much pleasure to hear a Dutch physician, whose acquaintance I made a few weeks since, and with whom I conversed on the above subject, say, that in his practice in Holland he had frequently directed the addition of a little salt to the milk for newly-weaned children, with a very happy result.

On my inquiry how the idea occurred to him, he said that he had observed that the peasants of Holland, in order to preserve the swine and cattle from a diarrhoea which frequently occurred in consequence of indigestion, mix salt with the fodder, and he reasoned from analogy that perhaps also children after weaning might in a similar manner, namely by the addition of a little salt to their milk, be protected from the diarrhoea which is so common under the circumstances; and the result had justified his expectations.

The proportion of salt to a given quantity of milk, must be determined by the age of the child; as much as can be taken on the point of a knife, or two or three times this quantity, may be added to a cup full of milk. In order to make the resemblance between cow's milk and woman's milk more perfect, I direct it to be boiled and skimmed, then a little sugar of milk is added, and lastly the salt. Fresh milk to which salt has been added should not be allowed to stand long, as acids will be set free, and coagulation promoted.

In a theoretical point of view, as I think, there is less objection to the addition of salt to the milk for young children, from the fact that this condiment not only benefits the stomachic digestion, by rendering the casein more soluble, but favors the formation of the blood, and renders the latter more fluid while circulating. Thus Moleschott in the *Physiologie der Nahrungsmittel*, says: "Of the inorganic elements of the blood, the chloride of sodium is the most abundant; its quantity is so great that it is not difficult to cause it to crystalize from an aqueous solution of the ashes of the blood. The chloride of sodium is also found abundantly in the tissues, especially in the cartillage, and also in the secretions and excretions."

Although milk, as Prout has very justly remarked, is to be regarded as the type of all food, since it contains all the elements which are necessary for the growth and nourishment of the human organism, as albumen, sugar, fat and the salts, and is particularly adapted, by its bland nature, for the organism of the child, yet it is often unfit for adults, who are accustomed to a more stimulating diet, on account of its insipid quality, and frequently gives rise to oppression and acidity of the stomach, and sometimes even to diarrhoea. Hence some persons have a strong objection to it, on account of its want of flavor. This objectionable quality is, however, easily removed; it is only necessary to infuse powdered cinnamon into the boiling milk, then dissolve in it a sufficient

quantity of salt, until the milk acquires an agreeable piquant taste, and add powdered sugar, in order to give it a decided and agreeable flavor. I have found that milk prepared in this way is very palatable to adults, and is readily taken and well borne by them. Those persons who are accustomed to take spirituous liquors may add to the milk, in order to improve its quality, rum or brandy (a small wineglassful to an ale-glass of milk). In this way milk is often taken in England and in Holstein, particularly in summer.

When the physician orders a regimen consisting wholly of milk (*milk-cure*), he should not forget to recommend salt and sugar to be added to the milk, according to the above method, both to render it more digestible, and also more acceptable to the taste; since the success of the "cure" depends in a great measure on the perfect digestion and assimilation of the milk, which are much assisted by these additions.

Morning milk, fresh from the cow, is frequently directed for women who are suffering from the effects of general morbid irritability, and often with good results. It sometimes happens, however, that the fresh milk is not well borne, or that the patients have a strong repugnance to its insipid taste. In such cases I advise a little salt, with one or two teaspoonfuls of powdered white sugar, to be dissolved in a small quantity of milk placed in an ale-glass; then fill up the glass with milk fresh from the cow, and drink it quickly. I have found that new morning milk prepared in this way is very easily borne. The remarkable effect of fresh milk in removing the above-mentioned morbid condition seems partly to be attributed to its being saturated with an animal vapor, a peculiar evanescent odorous principle, which cannot be isolated, and which speedily disappears after the milk has been drawn from the cow.—[*Boston Med. and Surg. Journal*.

On the Treatment of Gonorrhœa without Specific Medicines.

Having stated the necessity which existed for basing all decisions as to the value of remedies on written cases only, and for examining carefully the properties of one remedy at a time, till its true value had been ascertained, the author proceeded to give the result of his inquiries as to the action of certain curative measures in uncomplicated cases. All cases having been rejected which were not traced to their termination, it was found on careful analysis that the antiphlogistic plan of treatment did not appear to exert any material influence over the course of the disease; that waiting as many days with the same amount of rest and low diet, was equally serviceable. Local bleeding, to whatever extent it was carried, was not found to produce any real abatement of the symptoms, it only made the patient more languid and indifferent; aperients and purgatives, with zinc injections, were about equal to

specifics, as were also injections of nitrate of silver used without medicines. A combination of these formed a useful but not a certain plan of treatment. The result of the inquiries was, that chloride of zinc, in whatever way used, was not superior to the nitrate of silver; that injections of either could not be relied on; but he denied that any proof of their producing stricture or orchitis, except in a very small number of cases, had been brought forward. The author then recommended the preparations of potass as the most certain remedies yet introduced. Mr. Langston Parker, Mr. Henry Thomson, and many other surgeons had tried them with complete success.—[*Med. Times and Gazette.*

The Plantago Major in Spider Bite. By D. W. MAULL, M.D., of Georgetown, Del.

The *Plantago Major*, commonly designated Yard Plantain, so far as our researches extend, has never laid much claim in the books to the properties that we are about to ascribe to it. It is true that mention is made of it in this connection in some of the old journals, but its claims to the title of Alexipharmic, probably, were not sufficiently urged, or there were not enough cases advanced upon which to base its reputation. This plant is described as being refrigerant, diuretic, and deobstruent in its nature, but no reference is made to its possession of properties more valuable than any or all of these, in its power to counteract the effects arising from the bite inflicted by the venomous spider. With many of the profession and laity of this country—a locality where the plant and spider are both very common—the herb has attained to not a little repute in consequence of these virtues; and, indeed, deservedly, we opine, for from our own observation and that of others, we are led to regard it almost in the light of a specific, if such a term is admissible. My father has had frequent opportunities of testing its efficaciousness in this respect, and it is upon these cases coming under our notice, that we chiefly base our remarks and our confidence in its powers.

As to the *habitat* of this spider, it is found in cellars, along old fences, in lofts, and in dark and damp places generally. It is black, with a red spot upon its back. The wound inflicted by it partakes more of the characteristics of a bite than of a sting. With regard to the results of the admission of this septic poison into the system, it may be stated that the bite is quite dangerous in its consequences, and is regarded by some as virulent as that produced by the rattlesnake. We have seen one case where partial paralysis ensued upon it. The symptoms became somewhat alarming. If it is one of the extremities wounded, the limb soon becomes nearly rigid; swelling is not a prominent feature; the pain extends along the limb and becomes excruciatingly severe;

the peculiar poison soon diffuses itself; the system soon intimately sympathizes with the primary local disorder, as evidenced by the gastric irritability, and, if the poison is not counteracted, fatal results are apt to follow. With such alarming manifestations as these, it is very fortunate, we conceive, that we almost always have a remedy at hand to counteract its virulence.

This perennial plant—the plantago—is too familiar to all to require description; it is quite general in its growth, and consequently is easily obtained. The mode of preparing and administering, is to express the juice from the fresh leaves, and give three or four fluid ounces at a time. Cold water, with the view of facilitating the expression, may be poured over the leaves after they are bruised. This expressed juice may be given with every assurance of almost immediate relief. The intense pain consequent upon the bite soon ceases; the limb loses its rigidity, and assumes its natural use and motion. The irritability of the stomach is allayed, and all the parts soon acquire their normal appearance and functions. We may here embrace the opportunity to say that the toad, it is affirmed, in its combat with the spider, has been observed to resort to this plant every time that a bite has been inflicted.

The *modus medendi* of this potent medicine we shall not attempt to explain. No appreciable change is experienced in any of the evacuations. Under its employment, sleep is sometimes induced, but this is owing rather to the sudden freedom from pain which the patient begins to enjoy, than to any soporific tendencies inherent in the plant.

These observations have for their basis facts and cases sufficient to force upon the mind convictions as to the potency of this indigenous article in the relief of the spider bite. No hypotheses are indulged in, and no reasoning from analogies brought forward in support of a statement founded upon facts, and dependent upon no adventitious doctrines for its maintenance. This remedy unquestionably possesses merits sufficient to recommend it to the favorable consideration of the profession.—[*Med. and Surg. Rep.*

Abortion for Relief of Sickness.

Mrs. —, aged 38, a tall, pale, exsanguined, and emaciated woman, had been attended by me in previous confinements. She was the wife of a tradesman, and mother of a large family, and had always suffered exceedingly from sickness during the latter period of pregnancy, so much so as to necessitate confinement to her bed for the last month or two. She consulted me in April, 1854, when she was six months advanced, imploring me to do something for her sickness, or she should inevitably die. On former occasions I had exhausted remedies, and was therefore little hopeful of doing her good. It is true, the treatment might have been deemed em-

pirical, but this was of necessity. Doing battle with a symptom in no way advances the removal of its cause; and, indeed, it is difficult to conceive how vomiting, sympathetic with an affection of a remote organ (whether it be an uterus occupied with its ovum, a gall-duct impacted with calculi, or an ureter distended with lithic acid concretions), can be controlled otherwise than by remedies especially directed to the primarily affected organ. Of these, so far as the womb is concerned, we may be said to possess none, save, of course, such as would produce contraction and expulsion of its contents.

The poor woman's state was truly pitiable; not a particle of food nor a drop of fluid would remain on the stomach, even for five minutes. So long as total abstinence was maintained, there was peace; but the smallest quantity of the blandest material was immediately rejected; and, what seemed astonishing to her friends, for every spoonful she swallowed, two were thrown up. I went through the form of administering purgatives by the mouth and rectum; sedatives, as carbonic acid, preparations of opium, hydrocyanic acid, calomel, and morphia; compound tincture of senna, in drachm doses (a remedy in which some old practitioners appear to put faith; but which seems to me of as doubtful efficacy as the rest); blisters over the pit of the stomach, the vesicated surfaces being dressed with morphia ointment; croton liniment over the spine. All was to no purpose; the vomiting persisted; the debility increased; the emaciation became extreme; the pulse remained permanently at 110, and a mere wave; and my poor patient insisted that she must die. The seventh month was now complete; and although, on previous occasions, I had always seen Mrs. — accomplish her full term, notwithstanding the exhaustive drain to which she had been subjected, I now felt it could be so no more. To exist two months, or even two weeks longer, seemed clearly impossible. Death or delivery was the only alternative. I had been daily expecting that Nature herself, ere the woman's life was really imperilled, would have emptied the uterus of its contents; but nature not seeming disposed to have anything to do with it, I determined, after consultation with my partner, upon immediately inducing premature labour. There was no reason to doubt that the fœtus was alive; but the case was too urgent for the question of its viability to be entertained. Examination *per vaginam* revealed the os uteri low down, patent to the finger, soft and dilatable, and the head presenting. Puncturing the membranes appeared the most facile and expeditious mode of inducing uterine contractions. Sir C. Clarke's trocar and canula were used; the liquor amnii drawn off. No pain immediately followed; but in twelve hours one forcible uterine effort expelled the child, which, small and feeble, survived but an hour or two. From this moment the sickness ceased, but my patient for some weeks appeared to be in a dying state, so great was her debility,

and so little of any kind of nutriment was she able to take, on account of the extreme pain which this induced in the stomach. However, by slow degrees she rallied; and, after three or four months, was enabled to be carried down stairs, and I gradually withdrew my attendance.

In the spring of 1855, I was again sent for to Mrs. ———. It appeared that she had never gained sufficient strength to walk unaided across the room; yet little more than a year after her last accouchement she was again advanced upwards of six months in the family way. All her old symptoms had returned, if possible, in a more aggravated form; she had incessant sickness night and day, inability to take any kind of food or obtain sleep; great emaciation; pulse 120; and debility so extreme, that the poor creature could not turn in her bed without assistance. Again we punctured the membranes, and again a living child was expelled in about the same time. It breathed an hour or two, and expired. Mrs. T. now gradually ceased to vomit; but eating caused so much pain that she took but little food; the debility and emaciation increased, and ten days after delivery she sank. No post-mortem examination was permitted.—[*Mr. Gurraway of Faversham in British Med. Jour.*]

EDITORIAL AND MISCELLANEOUS.

THE AMERICAN MEDICAL ASSOCIATION—ITS POWER AND ITS INFLUENCE.—An examination of the minutes of the last meeting of the American Medical Association will develop a most active vitality in the association, and an earnest endeavor on the part of its members to promote the advancement of American Medicine in all its interests, whether *Scientific*, *Ethical*, or *Educational*. These three great interests, according to the present constitution of the body, represent the grand triplicate object of its jealous care. The guarding of these interests are the three great functions of the Association. The first of these functions, every class of the Profession yields most cheerfully to the Association, as its high prerogative and just privilege, at the second, only transgressors of the laws of Ethics are inclined to demur, while in regard to the third, which relates to the reform in Medical Education, there is a class who loudly exclaim against its daring to interfere with the private affairs of institutions, in *whatever* way they may be conducted.

The American Medical Association is not indeed a legislative body—this, its most ardent advocates and firmest defenders will readily admit: It does not pretend to force its dicta as *laws* upon the Profession with the sanctions of ordinary penal codes; but though not a legislative court, it is far from being a body without its legitimate influence, and still farther from being

devoid of laws, the violation of which are ever atoned for by penalties of the severest kind and most inevitable sequence. In its first establishment, a number of the best, the wisest and most honorable of the Profession, earnestly sought to lay down principles of right, for the direction and guidance of their brethren throughout the country; they met the approbation of the wise and the good wherever these principles were read. The principles of right were thus established, and a standard formed by them, which the Profession at large looked to as the criterion, on all questions of propriety pertaining to their conduct.

A standard and a criterion having thus been enunciated, and approved by every one, the power of the Association henceforth rests not so much in themselves as in the hearts and consciences of the Profession at large. It is for the Association only to declare that such and such a measure is not in accordance with the standard of Right, established and acknowledged by them, and by all, in and out of it, and this judgment being pronounced, public opinion applies the castigation which, in time, must inevitably bring reform or confusion to the offenders.

We are aware that there are many who affect to despise the opinions and rail at ethical rules and admonitions of the American Medical Association, as arrogant, offensive, and based on a power, only ideal.—Berkeley asserted, and believed, that life was *all a dream*, and that external objects and the powers of nature were but the ideal *representations* of things—yet Berkeley carefully avoided getting into the fire, for fear of being burned, and as carefully shunned the sea, for fear of being drowned. So these pretended despisers of the Association, affecting to condemn its opinions and its judgments, yet are ever anxious to prove that they transgress none of its rules, but have squared with the last letter of its counsels.

The American Medical Association then *is* potent,—it has a *moral* power rooted deeply in the hearts and consciences of men, and ramifying throughout the length and breadth of this wide extended land,—it is the true exponent, the highest tribunal of right in the Profession. It has only to be true to itself and to its own great principles—keeping these ever before the world as the *standard of Medical Ethics*, never swerving from them in one jot or tittle, but on the other hand, avoiding all petty and meddling tyranny towards particular individuals or particular institutions—and thus, however much some may affect to despise its admonitions and to beard its power, still Reform will follow in its train,—for as the fire *will* burn and the sea *will* drown, so will the violation of its ethical laws wither and overwhelm all who may be hardy enough to continue in transgression.

END OF THE THIRTEENTH VOLUME.—With the present number closes the thirteenth volume of the Southern Medical and Surgical Journal. In reviewing our labors for the past year, no one thing has yielded us more

satisfaction than the fact that we have been able to adhere to the spirit of the sentiment expressed in our second number, which sentiment was at the time intended by us as our Platform, in the Editorial conduct of the work. We here reiterate it, and hope that we may be able to adhere to it throughout the whole of our next volume.

"Our sixty-four pages, we find barely sufficient to elaborate the monthly accumulation of valuable matter, which the daily progress of the science is crowding upon us, and which duty impels us to lay before our readers. We have held it an object very near to our hearts, to keep the Southern Medical and Surgical Journal, as it has ever been, the conservative exponent of sound Medical Doctrine, steering clear, if possible, of any involvement in the many vexatious jarrings which too often destroy the symmetry and dim the glory of periodical literature, both Scientific and Polite; rendering the life of the Editor truly, but a "vanity and vexation of spirit;"—a vanity, because it fritters away, in *small* things and personalities, time and labor which should be earnestly devoted to the high and important objects of his calling; and a vexation, because "grievous words ever stir up anger," and "an angry man stirreth up strife."

These were then our words, and whether we present sixty-four pages or a *hundred* and sixty-four, we must thank the courtesy and good fellowship of our confrères that we have never yet had occasion to depart from either kindly impulse, or kindly sentiment.

By a reference to the Prospectus for the Fourteenth Volume, it will be seen that our Publisher, with a liberality fully commensurate with the requirements of the advanced state of Medical Science, proposes to add eight pages to each number of the work, without any advancement in the price of subscription. We hope that his generosity will be rewarded by an increased list and punctual payments.

In the original department of the now closing volume, we are aware that we have had too often, though reluctantly, to supply the defaults of contributors by the introduction of papers from our own pens; this was not our fault, but indeed our misfortune. We have a corps of contributors able to supply the most valuable matter, and what has been withheld during the present year we earnestly hope will only serve to enrich the coming volume.

The Transactions of the American Medical Association, Vol. X. Printed for the Association. Collins, Printer, Philadelphia. 8vo. pp. 676.

The above interesting volume has come to hand too late for us to present to our readers, anything like an extended review, of any of the papers, in our present number. Its size, and the character of its contents will, this time, certainly vindicate the Association from the Trans-atlantic charge of making "a big book with nothing in it."

Besides the addresses of the Presidents, the minutes of the last meeting, the reports of business committees, the plan of organization, code of ethics, and list of officers and permanent members, the volume contains thirteen papers, which may be said to be the Scientific Records of the Association for the present year. Some of these reports show much ability, and confer credit upon those who presented them, but at present we can do no more than present a simple list to our readers.

They are the following :

Report on the Medical Topography and Epidemics of Ireland.

Report on Infant Mortality in Large Cities : the Sources of its Increase, and Means for its Diminution. By D. Meredith Reese, M.D., LL.D., &c., of New York.

Report on the Medico-Legal Duties of Coroners. By Alexander J. Semmes, M.D.

Report upon the Topography and Epidemic Diseases of the State of Georgia. By John F. Posey, M.D., of Savannah.

Report on the Use of Cinchona in Malarious Diseases. By F. Hinkle, M.D.

Report on the Blending and Conversion of Types in Fever. By C. G. Pease, M.D., of Janesville, Wis.

Report on a New Principle of Diagnosis in Dislocations of the Shoulder Joint. By L. A. Dugas, M.D., of Georgia.

Report on the Fauna and Medical Typography of Washington Territory. By Geo. Suckley, M.D., U.S.A.

Report on the Medical Flora of Washington Territory. By J. G. Cooper, M.D.

Report on Deformities after Fractures. By Frank Hastings Hamilton, M.D.

Partial Report on the Nervous System in Febrile Diseases. By Henry F. Campbell, M.D., of Georgia.

Prize Essays.—The Excito-Secretory System of Nerves, its Relations to Physiology and Pathology. By Henry Fraser Campbell, M.D.

Experimental Researches Relative to the Nutritive Value and Physiological Effects of Albumen, Starch, and Gum, when singly and exclusively used as Food. By William A. Hammond, M.D., U.S.A.

Some of the above papers we will hereafter notice fully in this Journal.

BINDING OF THE PRESENT VOLUME.—It has been said that nothing strikes the human mind with greater horror than the idea of annihilation—the thought of passing entirely out of existence; hence every nation, from the most savage to the most enlightened, in its Theology, necessarily contemplates some place for departed spirits—some *after-life*, whether in form of a spiritual or a material Heaven or Hell—they all revel in the idea of *continued* existence, and are filled with horror at the blank—or we would rather say, the *black* idea of annihilation. This horror, we had almost said, is ours, at the present moment. When we reflect, that our twelve months' labors are lying *disjecta membra* in twelve perishable pamphlets, of sixty-

four pages each, liable to be torn, soiled, mutilated—*annihilated*, the wish (selfish perhaps) obtrudes itself upon us, that these twelve, to us, costly members could be collected and *bound* together, and thus *protected* in the more durable and convenient form of a single volume.

For the information of our subscribers who may reside conveniently to this place, we will state that in Augusta, there are two Book-binding establishments—one connected with the office of the *Chronicle and Sentinel*, and the other with the Bookstore of Messrs. T. Richards & Son; at either of these establishments the work will be done neatly, expeditiously and cheaply.

The Dissector's Manual of Practical and Surgical Anatomy. By ERASMUS WILSON, F.R.S., Author of "A System of Human Anatomy," etc. The third American from the last revised London edition. Illustrated with one hundred and fifty-four wood engravings. Edited by WILLIAM HUNT, M.D., Demonstrator of Anatomy in the University of Pennsylvania. Philadelphia: Blanchard & Lea. 1856. 12mo. pp. 583.

This valuable work was transmitted to us, through the kindness of its American publishers, some time ago. Since its reception, it has been our intention to call attention to it, at such a time as might be most serviceable to those requiring its indispensable aid in the prosecution of this arduous study, by giving notice of it just when they were about beginning their dissections. As this is the season for *Anatomizing*, we would earnestly advise every student, for his own benefit, to supply himself with a copy of this manual, before commencing operations, as Anatomy will be an up-hill business without it, and *with* it dissecting is made an easy, interesting and improving exercise. Not only is this System of Anatomy suitable as a guide to the dissector, but to the practitioner it is, perhaps, the most convenient and best arranged book of reference, in relation to the topography of any part, he may have to penetrate.

R. C.

Elements of Pathological Anatomy. By SAMUEL GROSS, M.D., Professor of Surgery in the Jefferson Medical College of Philadelphia; and formerly Professor of Pathological Anatomy in the Medical Department of the Cincinnati College. Third edition, modified and thoroughly revised. Illustrated by three hundred and forty two engravings on wood. Philadelphia: Blanchard & Lea. 1857. 8vo. pp. 771.

Nearly eighteen years ago, in the earliest days of our student-life, we read a work by the above author, on General Anatomy; both that and Pathological Anatomy were even then comparatively in an unsettled state. It is pleasant now to note the long advances which they both have made since then, and it is but common justice to Dr. Gross, to say, that to his

labors in this department, the profession in this country owe much of the attention which is now paid to the study of the tissues, both in a state of health and disease.

His, if we are correctly informed, was the first systematic work of any importance, which appeared on this side of the Atlantic, devoted to Pathological Anatomy. It has firmly maintained its position of favor with the profession, by the side of Vogel, Hasse, Kolliker, Cruveilhier, and a host of others, and through the author's indefatigable watchfulness is kept posted up to last hour of the Science at the issue of its several editions.

Dr. Gross has displayed much good judgment in keeping his work within the bounds of a single volume, and that one of convenient size. To the student of medicine we would say, that we know of no work which we can more heartily commend, than Gross' Pathological Anatomy.

Treatment of Chorea.—Dr. Barlow still continues the employment of the iodine of zinc in the treatment of chorea when complicated with struma—a remedy which he introduced into use, and to which we then adverted about two years ago. In cases in which there is no peculiarity of diathesis he employs the sulphate, but in those in which any indications of struma exist he prefers the iodide. Besides its influence over the scrofulous cachexia, it is quite possible that the iodic element may be useful against the rheumatic diathesis to which the choreic is so close a congener. Good authorities are not wanting who would account for the frequency of heart complications with chorea by supposing that the latter is a condition very closely connected with rheumatism, depending upon similar causes, and occurring more frequently in those liable to it than others. A little girl was discharged the other day from under Dr. Barlow's care in Guy's, in whom, under a course of the iodide for zinc in chorea, a loud cardiac bruit had very much diminished in intensity.—[*N. O. Med. News and Hospital Gazette*.]

Nitrate of Potash in Dysentery.—Dr. Tiedeman, of Philadelphia, has issued a pamphlet on Dysentery, and its Treatment. He says: "The internal remedy which I have almost exclusively prescribed, and frequently with surprising success, is *nitrate of potassium*, (*kal. nitr.*) I have given it in large doses, which agreed perfectly well with the patients. *Locally*, I have ordered, immediately after each evacuation, no matter how often they occurred, *injections of pure cold water*. In very severe cases, particularly in hot weather, he has ordered injections of ice water with the best effects. As diet, I ordered milk, gruel, barley, rice-water, toast and water, pure water, and butter-milk, as much as the patient liked to take."—[*Nashville Journal*.]

Inflammation and Ulceration of the Sound Skin, produced by the application of a strong Arsenical Solution.—Dr. W. N. Brown, of Melrose, has recorded the case of a farm servant who was affected with inflammation of the skin of the lower part of the abdomen, the penis, scrotum, and upper part of the thighs, running on in some places to ulceration, consequent on exposure for two hours to the action of a solution of white arsenic. He

had been engaged in washing sheep in a bath composed of white arsenic dissolved in boiling water, and his trousers had become saturated with the drippings from the sheep. The skin was nowhere broken. He was engaged in the work for nearly two hours, and on going home, had immediately changed his clothes. In the evening he complained of pain and smarting, and the following morning the skin was red and inflamed. He had severe burning pain, and considerable constitutional derangement. It was a fortnight before he could return to work. The solution consisted of two pounds of arsenic, and a considerable quantity of soft soap to about fifty gallons of boiling water.—[*Edinburgh Med. Jour.*]

Dr. Ch. Robin, of Paris.—We find in a letter of the Parisian correspondent of the New York Times, a glowing but just tribute to Robin. Of the medical luminaries of Paris, he is a "bright particular star." To listen to his instructions; to see and know him and kindle one's own zeal by witnessing his enthusiasm and self-sacrificing industry, are objects of themselves, sufficient to repay for crossing the Atlantic. The labors of Robin are not known in this country so much as their importance claims. His great work incorrectly styled anatomical and physiological chemistry, prepared in conjunction with M. Verdeil, is yet to be translated. He has been for some years past engaged on a still larger work—general anatomy, healthy and morbid—which we trust will soon be completed. It is safe to predict that the publication of this work will form an important epoch in the history of these branches of medical science. By his admirers, Robin is often styled the Bichat of the present day. The following is the passage in the letter referred to:

"There is a young physician at Paris, whose example is well worthy a notice here. His is a name which is heard hundreds of times daily from one end of Europe to the other in the mouths of the most distinguished men of science of all countries. And yet he is a poor man, who dines at a cheap restaurant in the Latin quarter with students, and who lives upon a patrimony that would scarcely pay the servant hire of many of his colleagues in science. This is Robin the microscopist. He is a deathly pale, thin, serious-looking man, of about thirty-four years of age. His whole life is devoted, by means of the microscope, to the study, the demonstration and classification of morbid tissues. There is scarcely a cancer excised at Paris, nor a doubtful *post-mortem* examination made, that Robin and his microscope are not consulted, and his word is authority. His whole life is spent in the exploration of the dead body in order to benefit the living. And all this he does modestly, in poverty, and to the sacrifice of his health, for the promotion of pure science and correct opinions. He has, it is true, the gratification of being adored by his colleagues, old and young, of never having his name pronounced but with veneration; but it is such men as these that are neglected by the public."—[*Buffalo Medical Journal*.]

"*The Retired Physician.*"—The readers of the newspapers for the last few months, must have noticed an announcement of the existence of a "retired physician whose sands of life have nearly run out," hailing from Jersey city. This aged advertiser of a quack nostrum is said to be a young man about twenty-five years old, in good health, and engaged most of the time in writing for the New York Sunday papers. Such is the inexhaustible credulity of a portion of mankind on the subject of remedies, that we presume this "new dodge" has proved remunerative to the inventor."—[*Id.*]

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